

## INSIDE DOPE

by GEORGE F. TAUBENECK

Stories of the Week  
Gags of the Week  
Sports Fan Stuff  
Newspaper Humor  
(Unconscious or Otherwise)  
We Can Trust Him  
News You May Have Missed  
Out of Our Mailbag  
Post Scripts

### Stories of the Week

Corporal Edgar Allen Poe is deemed the U. S. Army's highest authority as to his celebrated cousin's life and hard times.

"My relative was dismissed from West Point because he marched in a parade without trousers," Corporal Poe remarks on occasion. This opening gambit is an ever-good ticket for free beers in Korean barracks.

Rumors usually aren't true. Nevertheless they start atomic chain-reactions. Twisteroo:

"Are you really leaving town 'on the double' tonight?" a USO girlfriend quavered.

"Why, no. Er, should I?"

Lassie from New England looked for, and found, her Alabama weekend hostess.

"I have a problem," she worried. "Every boy here either has proposed to me, or propositioned me."

"You sweet child! Don't bother your pretty head," Mrs. Alabama advised. "At a Southern house party that's just common courtesy."

She didn't fulminate, she didn't argue or reason, she didn't do much of anything. Nevertheless a patient Little Old Lady "hung" the jury.

The accused had shot her husband before witnesses, but the Little Old Lady was steadfast.

Against triple-starred evidence she held out for acquittal.

"That poor woman," she argued, "is a widow."

Having been licked "20-ways-to-Saturday" a filmhand child resorted to the age-old final thrust:

"My daddie can whip yours."

"Don't be silly," superior Joey. "Your dad is my father."

### Gags of the Week

Reporters in Los Angeles passed the hat betwixt themselves to pay the traffic fine assessed on a Korean jet ace.

Luckily the fine was one dollar. Had it been more they'd have had to get outside help.

Unconscious humor in a letter received from a Texas dealer:

"Our customers continue begetting us new ones because we have parts to take care of any emergency."

### Sports Fan Stuff

What's in a name?

Fielder Jones was a great outfielder with the Dodgers and the White Sox.

Battling Nelson became lightweight boxing champion of the world. Really he was christened "Battling," which is a common name in Scandinavian countries.

Willie Thrower did nothing but throw footballs for Michigan State's football team.

Johnny Sain, Yankee pitcher, is smart as they come.

Warren Hacker, pitcher for the Cubs, hit little else but foul balls.

Frank Thrasher, an outfielder for the Philadelphia Athletics in 1917, had a reputation for throwing wildly.

Homer Thompson, catcher with the 1912 Yankees, hit only singles.

Adam Swigler of the Giants took only an occasional beer, and Charley Swindell, a Cardinal, was a thoroughly honest hombre.

Wallie Pipp, first baseman for the Yankees, was indeed a topnotcher.

Johnny Frill, pitcher for the Yankees of 1910, did not have enough frills in his repertoire. He won two games, lost two.

John Jacob Fanning, who pitched for Indianapolis, registered few strike-outs.

(Concluded on Page 10, Column 1)

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## Locker Men Form Division To Push Freezer Food

ELIZABETHTOWN, Pa.—Formation of a new division to promote freezer-food plans through national advertising and establish "a high level of ethical and operational standards" has been announced by National Frozen Food Locker Institute.

To be known as, Certified Freezer Food Suppliers of America, the new division will be limited to locker operators who are Institute members.

It will be financed by contributions from members, based on their annual gross volume. Plants with gross volume of \$250,000 or less will contribute \$100 annually; those in the \$250,000 to \$500,000 class, \$150; over \$500,000 gross volume, \$200 a year.

These contributions will be in addition to regular Institute membership dues.

Full details of the new program will be announced at the Institute's annual convention to be held Sept. 13 to 16 at the Morrison hotel in Chicago.

Besides being an Institute member, locker operators who wish to participate will be required to pay a fee. (Concluded on Page 28, Column 2)

## G-E Adds 11.2-Cu. Ft. Automatic Defrost Refrigerator to Line

LOUISVILLE, Ky.—An 11.2-cu. ft. automatic defrosting refrigerator with deluxe features has been added to the General Electric 1953 line, announces W. M. Timmerman, general manager of the household refrigerator department.

Designed for large families, the refrigerator has been designated the LD-112 and carries a recommended retail price of \$399.95.

It has a full-width across-the-top freezer compartment with a capacity of up to 39 lbs. of frozen foods, the equivalent of 48 average-size frozen food packages, and over 10 cu. ft. of fresh food storage space.

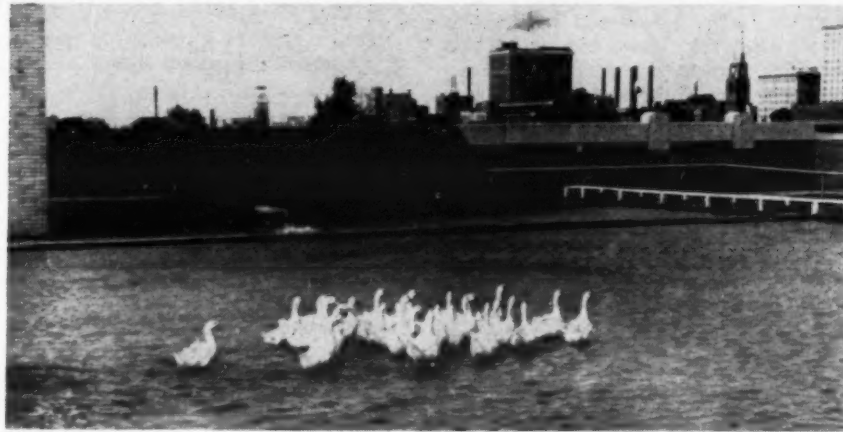
Other features include four aluminum shelves, three of them adjustable and two of them sliding; a swing basket, two large fruit and vegetable drawers, four door-shelves, a butter compartment, three "Redi- (Concluded on Page 4, Column 3)

## Alcoa Boosts Aluminum Prices after Wage Rise

PITTSBURGH—Aluminum Co. of America last week raised the price of pig and ingot aluminum 1/2 and 1 cent per pound, respectively. Prices of sheets, bars, rods, and other shapes processed from ingot are expected to go up shortly.

The price rise follows wage increases of 8 1/2 cents per hour to Alcoa workers. Most commercial aluminum products are made from the forms of aluminum on which prices were raised.

Reynolds Metals Co. is still negotiating new contracts. An official said that if higher wages were granted, higher prices on its aluminum products would undoubtedly follow.



"Penthouse Apartment" provides luxurious living for 40 tame ducks atop the Sears Roebuck & Co. store in downtown Louisville, who make the most of the roof-cooling spray pond which is part of the store's air conditioning system. The birds eat well off the fungi, which would otherwise accumulate to the detriment of the cooling system. Ducks and store officials are both happy. (Wide World Photo)

## Additional Rent Increase Denied to N. Y. Landlords for Tenants Having Room Units

NEW YORK CITY—Request by landlords for permission to increase existing electricity charges to tenants using room air conditioners has been turned down by the New York State rent administrator.

Landlords had sought to boost these charges at a hearing before the Temporary State Housing Rent Commission here which was also attended by representatives of the air conditioning and refrigeration industry.

However, State Rent Administrator Joseph D. McGoldrick afterwards declared that the schedule issued May 20 "is not unreasonable and requires no modification at the present time."

## Contractors Losing Fight To Keep Auto A.C. In Detroit Code

DETROIT—Detroit's refrigeration contractors lost another round last week in their battle to keep automobile air conditioning under the city's refrigeration safety code.

Granted a public hearing before the city council, members of the Refrigeration and Air Conditioning Contractors Association of Detroit failed to convince the councilmen that it was in the public interest to license supervisory mechanics who install or service automobile air conditioning systems.

Council President Louis Miriani said that the council would take (Concluded on Page 25, Column 4)

## Hotpoint Raises Prices On 5 Refrigerators

CHICAGO—The Hotpoint Co. recently notified its distributors that five refrigerator models would be increased from \$10 to \$20 per model effective July 13.

Reason for the increase is attributed to the recent increase in steel costs, together with wage increases and a general increase in cost of production, which could no longer be absorbed.

Price increases on eight of 10 range models and five of seven dishwasher models were also announced. (Concluded on Page 25, Column 3)

## Borg-Warner Cooler Designed for Forced Water Systems

KALAMAZOO, Mich.—A room air conditioning unit that provides cooling by blowing room air over cold water coils will be put into production this month by Hydraline Products, Borg-Warner Corp. here.

Called the "Hydraline" unit conditioner, the unit is designed for use with central forced water systems to combine individual room controlled winter heating and summer cooling at low cost.

Small and compact, the basic unit can be fully recessed between single joists under the floor or between single studdings in either inside or outside walls.

It can be installed on (1) two pipe reverse return systems, (2) single or multi-loop Monoflow systems, or (3) single or multi-manifold systems. Hydraline central boilers, water chillers, and accessories necessary for complete system installation. (Concluded on Page 28, Column 5)

## Fedders Launches Drive To Sell Units Year-Round; To Make 300,000 This Year

BUFFALO—A January to December season for room air conditioners is at hand, Robert F. Cassatt, general sales manager of the refrigeration appliances division of Fedders-Quigan Corp. indicated recently.

He said that his company last week launched an advertising and sales promotion campaign to convince dealers that room coolers can be sold the year 'round.

"The 1954 season will start this fall for Fedders and we will merchandise, advertise, and promote to a fare-thee-well," Cassatt declared.

The campaign was launched with (Concluded on Page 4, Column 4)

## Room Units Up 400%, Chicago Permits Show

6-Month Figure of 1,450 Comes Close to Total For All of 1952

CHICAGO—Nearly four times as many room air conditioners are being sold and installed in Chicago this year as compared with 1952.

Statistical proof of this terrific pace is provided in totals of installation permits issued by the city's Boiler and Refrigeration Inspection Department, according to Gerald Gearon, supervising mechanical engineer.

Permits for 1,450 room units (under 2 hp.) were issued in the first

## Room Units May Top Million—ARI

WASHINGTON, D. C.—Shipments of room air conditioners in the first six months were 215% ahead of the same period in 1952, according to manufacturers reporting to the Air-Conditioning and Refrigeration Institute here.

At this rate, 1953 shipments will exceed 1,000,000, compared with the 365,451 shipped by manufacturers last year, ARI announced.

six months this year, compared with 407 in the same period last year. In fact, the January-through-June installations this year come close to the 1,737 total for the entire 12 months in 1952.

And the biggest months, probably, are still to be counted—July and August.

Although the installations requiring permits are only a percentage of the total room units being sold, there are indications that the boom is at least as pronounced among residential buyers.

The city of Chicago does not require permits for most residential installations of room air conditioners. Last year a total of 1,737 permits, for example, were issued, compared with an estimated 10,000 total installations in the city.

As the accompanying tabulation of (Concluded on Page 4, Column 3)

## Cooling Essential Part Of Building, Judge Says

OKLAHOMA CITY—Air conditioning is an essential part of a modern office building—in Oklahoma anyway.

District Judge Glen O. Morris decided that it was when he interpreted the will of the late W. T. Hales. This interpretation allowed the management of the Hales building to go ahead with plans to air condition the structure.

According to K. Cavett, manager and trustee, "When Hales made his will, air conditioning was not considered an essential part of an office building. Our tenants have wanted this, and we have wanted to do it. The court's interpretation of the will permitting us to do the work will again put the Hales building out front of most office buildings here."

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## FTC Approves New 'Push Money' Rule

WASHINGTON, D. C. — A new standard "push money" rule for inclusion in industry trade practice rules has been approved by the Federal Trade Commission.

The new rule differs from the old "push money" rule only in that it no longer requires that the customer be informed when the salesman is being paid extra to push a certain product.

The text of the new "push money" rule is as follows:

"It is an unfair trade practice for any industry member to pay or contract to pay anything of value to a sales person employed by a customer of the industry member, as compensation for, or as an inducement to obtain, special or greater effort or service on the part of the sales person in promoting the resale of products supplied by the industry member to the customer—

"(1) When the agreement or understanding under which the payment or payments are made or are to be made is without the knowledge and consent of the sales person's employer; or

"(2) When the terms and conditions of the agreement or understanding are such that any benefit to the sales person or customer is dependent on lottery or chance; or

"(3) When any provision of the agreement or understanding requires or contemplates practices or a course of conduct unduly and intentionally hampering sales of products of competitors of an industry member; or

"(4) When, because of the terms and conditions of the understanding

or agreement, including its duration, or the attendant circumstances, the effect may be to substantially lessen competition or tend to create a monopoly; or

"(5) When similar payments are not accorded to sales persons of competing customers on proportionally equal terms in compliance with Sec. 2(d) and (e) of the Clayton Act.

"(NOTE: Payments made by an industry member to a sales person of a customer under any agreement or understanding that all or any part of such payment is to be transferred by the sales person to the customer, or is to result in a corresponding decrease in the sales person's salary, are not to be considered within the purview of this Rule, but are to be considered as subject to the requirements and provisions of Sec. 2(a) of the Clayton Act."

## 3A Sanitary Standards For Farm Cooling Tanks Published

WASHINGTON, D. C.—3A Sanitary Standards for farm holding and/or cooling tanks—formulated by International Association of Milk and Food Sanitarians, United States Public Health Service, and the Dairy Industry Committee—have been approved and are in voluntary effect.

Published in the July-August issue of *Journal of Milk and Food Technology*, the Standards cover in detail material, fabrication, measuring devices, and installation of the tanks. Preliminary work in the formulation of the Standards was done by a task committee of the technical committee of Dairy Industries Supply Association. Reprints are obtainable from the Dairy Industry Committee or DISA.

## Dearborn Stove Buys, Will Operate Odin Stove Mfg.

ERIE, Pa.—Sale of the Odin Stove Mfg. Co., manufacturer of the Beautyrange and Beautydryer gas and electric ranges and clothes dryers, to the Dearborn Stove Co. of Dallas was announced recently by E. C. Fisher, Odin president.

D. O. Tomlin, Dearborn president, said that the purchase of Odin is part of the company's plan to expand in the appliance field.

He said the Odin firm would continue to operate in Erie and that no personnel changes were contemplated except to expand present operations to accommodate nationwide distribution.

## Southern Dealers Schooled On Iron Fireman Products

CHARLOTTE, N. C.—Special attention was given to the new Iron Fireman central cooling unit for residential air conditioning during a company-sponsored sales and engineering meeting for southern dealers held here recently.

Seventy heating and air conditioning equipment dealers attended the two-day school. Speakers included C. T. Burg, Iron Fireman vice president, sales; S. H. Beach, industrial sales manager; Dale Wylie, director advertising and sales promotion; and E. V. Crossin, manager of the southern region.

In addition to offering material on specific sales features of Iron Fireman equipment, the school covered the company's promotion program.

## Top Executives of Sunbeam Air Conditioner Div.



T. W. McNEILL



H. M. CARNAHAN



F. P. WEIL

THREE MEN WHO WILL HEAD the new Sunbeam Air Conditioner Div. of American Radiator & Standard Sanitary Corp. are: Thomas W. McNeill, president; H. M. Carnahan, vice president, sales; and Frank P. Weil, vice president, manufacturing. The division will handle warm air heating and cooling equipment, including product development, manufacturing, and distribution.

## I-H Refrigeration Sales Top \$22 Million In 6 Mos.

CHICAGO — International Harvester Co. sold \$22,434,000 worth of refrigeration equipment and service parts during the six months ended April 30, John L. McCaffrey, president of the company, reported.

This compares with \$21,979,000 during the same period last year.

During the six months, International Harvester produced 141,800 refrigerators and freezers as compared with 123,700 in the 1952 period.

"There is an excellent prospect that we will finish ahead for the entire fiscal year (of which the period reported is the first half), despite the highly competitive situation in the industry," McCaffrey declared.

## Elson, Ergang Get Posts At Mills Industries Plant

CHICAGO—Appointment of B. E. Elson as factory manager and George K. Ergang as manager of industrial relations for Mills Industries, Inc., was recently announced by Walter F. Hermann, vice president in charge of manufacturing.

Both Elson and Ergang were formerly management consultants. Mills Industries manufactures beverage coolers and dispensers, ice cream and frozen custard equipment, and other related products.

## Mueller Brass Opens New Warehouse In Kansas City

PORT HURON, Mich.—F. L. Rigg, Sr., president of the Mueller Brass Co., recently announced the expansion of facilities in the Kansas City area through the addition of warehouse stocks of all standard products sold by the company.

The new warehouse, located at 3215 31st St., containing 10,500 sq. ft. of floor space will house both sales offices and warehouse stocks.

The new facilities, according to Rigg, will serve customers in Kansas, Missouri, Iowa, Nebraska, Colorado, and Wyoming.

C. R. Black is district sales manager for the company and N. B. Sichterman, formerly of Port Huron, has been named to head the warehouse operations.

## Chicago Assn. Surveys

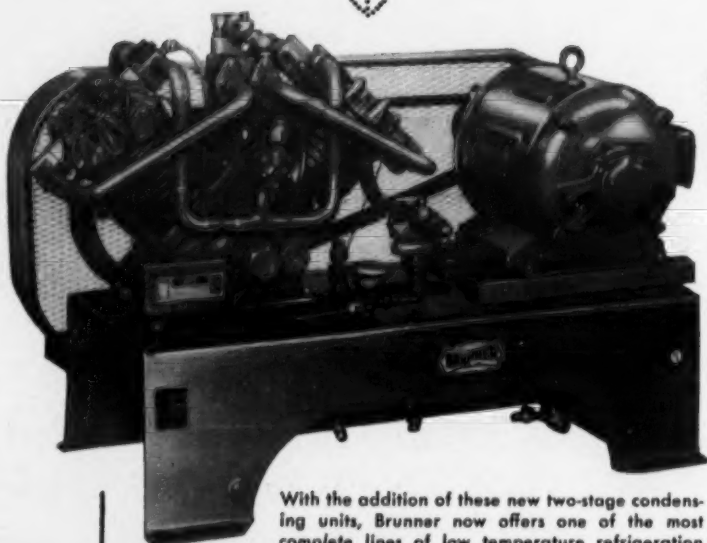
### Dishwasher-Disposer Sales

CHICAGO—The Electric Association of Chicago has announced that it has begun making quarterly surveys of distributor sales of dishwashers and garbage disposers to dealers in Chicago and within a 50-mile radius of the city.

First report issued recently showed that the 12 reporting distributors sold 1,177 dishwashers during the first quarter of 1953 and 4,964 in all of 1952. They sold 2,135 garbage disposers in the first quarter and 7,227 in 1952.

why use two

when one will do?



With the addition of these new two-stage condensing units, Brunner now offers one of the most complete lines of low temperature refrigeration in the industry!

**NOW AVAILABLE!**

COMPLETE DATA AND SPECIFICATION SHEETS ON THESE GREAT NEW BRUNNER UNITS

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OPEN THE DOOR TO NEW PROFITS  
IN LOW TEMPERATURE APPLICATION**

Now — with these new 2-stage Brunner units — you can easily handle many low temperature applications that formerly required hookups of two or more condensing units! Designed for use with both F-12 and F-22 refrigerants, these new Brunner units have ratings as low as -100°. Ideal for use in cold test chambers, frozen food, metal processing and other applications where sub-zero temperatures are desired.

Naturally, the installation and maintenance costs of these 2-stage units are much lower than jobs using two connected single stage condensing units. Get all the facts today — see your Brunner representative — or write us.

Brunner Manufacturing Company Dept. A-73, Utica, N.Y., U.S.A.  
IN CANADA: Brunner Corporation (Canada) Limited, Toronto, Ontario



Brunner 2-stage condensing units are available in 15 models, ranging from:  
**3 H.P. to 30 H.P.**



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you get **600,000** sq. ft. of the best possible drying surface in this **MUELLER BRASS CO. DeLuxe Filter-Drier**

Hundreds of thousands of Silica Gel granules manufactured to a special size and sealed into a 12 cu. in. Mueller Brass Co. DeLuxe Drier provide over 600,000 sq. ft. of the best drying surface you can get—more than enough to keep your refrigerant thoroughly dry at all times. Many extravagant claims are made regarding the moisture absorbing capacities of desiccants. The property that is most important to the refrigeration industry is not the total amount of water that a desiccant will absorb, but rather it's the end-point dryness of the refrigerant that really counts. End-point dryness is the amount of moisture left in the refrigerant after the drier has absorbed its capacity. Tests prove that Silica Gel has the capacity to absorb and hold twice as much moisture, by weight, as other commonly used refrigeration desiccants, while maintaining a fixed end-point dryness.

To date, more than 2,750,000 Mueller Brass Co. Driers have been installed in commercial refrigeration systems all over the world. The completely satisfactory service they have given wherever they were installed is proof enough that you just can't buy a drier anywhere at any price that will keep your refrigerant so thoroughly dry, so scrupulously clean and free from foreign matter. Mueller Brass Co. Driers are available in capacities from 3 cu. in. to 242 cu. in. Order now from your refrigeration wholesaler.

Write for catalog describing the complete line of Mueller Brass Co. STREAMLINE refrigeration products.



108-A

**MUELLER BRASS CO. PORT HURON 9, MICHIGAN**



## Chicago Electric Assn. Plans 6-Week Home Freezer, Food Show

CHICAGO—The Electric Association of Chicago, in cooperation with Commonwealth Edison Co., 10 distributors of brand name freezers and one food brokerage concern, is sponsoring a Home Food Freezer Show in the Edison building.

The show, which will have its formal opening Monday, July 27, will continue through Sept. 7. Chairman of the committee responsible for organizing and conducting the show is Julian E. Shelton, Crosley Div., Avco Mfg. Co.

Distributors who, together with Commonwealth Edison Co., have signed up to participate in the show and help finance it on a subscription basis are: Appliance Distributors, Inc., Amana-Chicago Corp., The Harry Alter Co., Triangle Industries Corp., Frigidaire Sales Corp., R. Cooper, Jr., Inc., RCA Victor Distributing Corp., Revere Electric Supply Co., The Sampson Co., and Graybar Electric Co., Inc.

A special frozen foods tie-in has been arranged with E. A. Aaron & Bros., food distributor.

To help draw attendance, an advertising budget of \$9,000 has been approved.

Advertising will have as its theme: "Live Better for Less, with a Home Freezer!"

Feature attraction at the show, in addition to displays, will be two "freezer living" demonstrations daily, Monday through Friday, for the six weeks the show is conducted.

These demonstrations will be given at 12:15 and 2:15 p.m. They will consist of three 20-minute shows which will cover:

(1) Meat cutting or similar attention-getting feature.

(2) Freezer convenience and savings, by home economists of the various participating distributors and the staff of Jane Foster, director of home economics for the Electric Cooking Institute.

(3) Use of packaged frozen foods, by home economist representing frozen food broker.

Based on experience with the recent home laundry and air conditioning shows, the Electric Association anticipates an attendance of more than 100,000 at the home freezer show and displays.

Heading the educational program subcommittee for the freezer show is Perry Winokur of Amana-Chicago Co. Lester Smith, the Sampson Co., is subcommittee chairman in charge of advertising and promotion.

## Patrons Drive In Furniture Store—And Right Out Again

PHOENIX, Ariz.—Bennetts Furniture Store officials here thought they had a good idea when they spent \$40,000 to remodel so that customers could drive into the store and park inside.

But, according to Chris Keller, sales manager, customers would stroll down the parking lane, but would hesitate to pass through the openings in the parking rails to the sales floor.

So now, the company has decided to remodel again—back into the conventional type store.

## Air-Conditioning Design Engineer

York-Shipley has an unusual opportunity for a designer of air-conditioning equipment to be responsible for the design, testing and application of home cooling units. This is an unusual opportunity for the proper man to become associated with a new branch of our business. Applicants should be graduate mechanical engineers with experience in the design of cooling equipment. Please contact:

C. H. NEIMAN, JR., V.P.  
In charge Engineering  
York-Shipley, Inc.,  
York, Pennsylvania

## Navy Increases Air Conditioning To Include Ships' Living Quarters To Keep Men Alert, Combat Fatigue

SYRACUSE, N. Y.—Officers and enlisted men stationed aboard capital ships of the U. S. Navy soon will have their living quarters completely air conditioned if the present trend continues, S. W. Brown, chief engineer of the Marine Department of Carrier Corp., told naval reservists here recently.

Brown, speaking before Voluntary Naval Reserve Unit 20 of the Third Naval District, said air conditioning of naval warships before and during World War II included only such vital spaces as radar, communications, and ammunition rooms, as well as aircraft carrier ready rooms and hospital operating rooms.

"Within the last five years, however," he said, "air conditioning applications aboard naval warships have been considerably more extensive, following a series of successful tests conducted by the Bureau of Medicine and Surgery, U.S.N."

"Wartime experience in tropical waters, the Bureau revealed, proved

that the crew in a completely air conditioned warship—living quarters included—would have a distinct and perhaps decisive advantage in action with an enemy fatigued and of lower alertness from living aboard a hot ship."

As a result of the Bureau's findings, Brown told the reservists, the Navy installed complete air conditioning equipment aboard the U.S.S. Salem and U.S.S. Newport News for experimental purposes.

He said both of the Navy's new aircraft carriers, the U.S.S. Forrestal and the U.S.S. Saratoga, will be completely air conditioned. Carrier recently was awarded the contract for the second of the two. The U.S.S. Forrestal contract was awarded Carrier several months ago.

"Each of the supercarriers," Brown said, "will be equipped with six centrifugal refrigeration machines having a cooling capacity of 900 tons total. Seven reciprocating units will take care of ships' stores refrigera-

tion and the cooling of drinking water. The twin carriers will be the largest fighting ships ever built."

Brown described the latest air conditioning systems being employed on our newest type of "snorkel" submarines and said the atomic submarine, currently under construction, would not be practical without considerable air conditioning equipment.

## Refrigerators Full of Foods That Don't Belong There

CHICAGO—Many housewives load their electric refrigerators with prepared foods that do not really belong there. According to Mrs. Vivian Overand, director of home economics for Admiral Corp., jellies, preserves, and syrups do not have to be refrigerated.

Vinegar, chili sauce, catsup, mustard, and other highly spiced condiments also will keep well on the pantry shelf, she said.

The only exception is olives. Storing a jar of olives in the refrigerator will prevent the formation of the unsightly scum on the surface of the brine.

## They Oughta Know!

KNOXVILLE, Tenn.—To paraphrase a well-known commercial slogan: With the men who know weather best—it's air conditioners two to one!

Employees of the Weather Bureau station at Knoxville airport, it is reported, recently purchased two air conditioning units for their station—out of their own pockets.

## G. B. Hightower Elected Pres. Of Atlanta Contractors Group

ATLANTA—George B. Hightower, president of Conditioned Air Engineers, Inc., has been elected president of the Atlanta association, Heating, Piping and Air Conditioning Contractors, for 1953-54.

Other officers installed at the annual meeting were Marion H. Darby, vice president; Clayton F. Kline, secretary; and Millard C. Norris, treasurer. C. V. Brownlee was re-elected manager. Directors are H. M. Court, E. H. Hillard, and E. K. Jamison.

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WITH  
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**Picks up moisture faster . .  
holds more moisture longer . .  
than any other type or form of  
desiccant or refrigerant drier.**

Buy them at leading refrigeration wholesalers everywhere

Ansul T-Flo Driers are new in design, new in appearance and contain the remarkable new desiccant, **ANDRITE**. They provide greater capacity, higher efficiency and a faster rate of moisture pickup. In addition they are easy to install and much easier to replace than the conventional types of refrigerant driers.



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YOU CAN  
COUNT ON**

**FULLY  
AUTOMATIC**

**ICE-  
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**FIVE  
ICE-FLO  
MODELS—**

Sizes from 1/2 h.p. to 1 1/2 h.p. The smallest makes 2520 deluxe size cubes daily. The largest delivers 10,800 per day. Pull out storage cabinets hold from 8 to 12 hrs. production.

**THE ORIGINAL Solid-Cube Ice Maker for Hotels, Restaurants, Clubs, Bars, Cafeterias, Schools, Hospitals, Institutions, Drug and Chain Stores.**

A DOOR-OPENER to better ice service, Ice-Flo automatically produces sparkling clear, solid, extra-large ice cubes in quantity at point of use. They neither mat nor stick together. Freezing compartment is self-cleaning. Cubes last longer in drinks and in storage because they are solid.

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**WHOLESALE ONLY**

**Chicago Room Units-- Year-Round Drive--**

(Concluded from Page 1, Column 5)  
room unit permits issued each month shows, first evidence of a possible boom came in March, when 74 permits were issued, compared with four in March of last year.

April's permits zoomed to 116 (there were 18 a year ago), and May continued to climb with 310, compared with 108 in May, 1952.

June installations rocketed to 922, nearly four times the 242 recorded for June of last year.

Biggest months last year were July with 565 and August with 393.

At the rate new permits were being issued the first part of July this year, these two figures will undoubtedly be exceeded.

**Chicago Installations  
Of Room Units**

	1952*	1953*
January	9	16
February	26	12
March	4	74
April	18	116
May	108	310
June	242	922
6 Months	407	1,450
July	565	...
August	393	...
September	202	...
October	74	...
November	75	...
December	21	...
Total	1,737	...

\*Includes only those units under 2 hp. which require city permits. Most residential installations are exempt from permits and are not included in this tabulation.



General Electric Model LD-112

**Fedders Production --**

(Concluded from Page 1, Column 5)  
believed that installation costs would be lower than those of conditioners in current use.

Giordano stated that during the fiscal year ending Aug. 31, Fedders will have sold about \$33 million worth of room coolers. This would be a total of 190,000 units, about 105,000 of them under the Fedders label and the other 85,000 of them under contract for Crosley, RCA, and Remington.

Commenting on his contract work, Giordano said that his contracts with RCA and Crosley still have three years to run. But the contract with Remington ends on Aug. 31 and Fedders will discontinue producing units for Remington then, he said.

"Regarding sales figures on a calendar year basis for purposes of industry comparisons," Giordano declared, "we expect to sell 130,000 Fedders room air conditioners during calendar 1953."

"On either a fiscal or calendar year basis, we believe sales of the Fedders brand should be equal to or only very slightly behind those of Philco, which has held the No. 1 position as to volume of room air conditioner sales, thus making Fedders no less than a strong No. 2. We also held this position in 1951 and 1952."

During the calendar year, Fedders plans to manufacture 165,000 units under its own label. This would be approximately 35,000 units more than it expects to sell. These extra units will be produced for inventory against the 1954 season.

Giordano said that Fedders was currently producing units at the rate of 1,600 per day in its plants at Buffalo and Maspeth, N. Y. This is triple the rate a year ago.

He continued, "I shall not attempt to make a forecast for the 1954 season, but I will venture the following for the calendar year of 1953:

"I would not be surprised to see the industry's total unit output for the year reach close to the 1,000,000 mark and for sales to approximate 800,000 units."

**G-E Refrigerator --**

(Concluded from Page 1, Column 2)  
Cube" ice trays, and an automatic interior light.

The interior of the door panel and the breaker strips—insulating strips around the door opening—are finished in a pastel blue instead of the customary white. It is the first use of such color treatment in the G-E appliance line.

A sloping aluminum baffle, below the full-width evaporator, causes cold air to circulate down the back to the bottom of the fresh food section. Termed "Roto-Cold," this system of cold air circulation is designed to provide a more even temperature throughout the fresh food section.

A sealed heating unit, built into the across-the-top evaporator, is turned on automatically by a frost limiting device whenever defrosting is necessary. Called the "Frost Limitor," this device combines several factors affecting frost formation.

"Thus," it was stated, "the refrigerator adjusts itself to varying climates and usage and only a trace of frost ever forms. The sloping baffle carries defrosting water to the back of the cabinet where it is channeled to a collecting pan in the base from which it is evaporated."

The LD-112 is 66 1/2 in. high and 31 in. wide, with an over-all depth of 29 1/2 in.

**Report Norris-Thermador  
Negotiating To Buy L & H**

LOS ANGELES — Norris-Thermador Corp is negotiating for the purchase of the A. J. Lindemann & Hoverson Co. of Milwaukee, manufacturer of ranges, water heaters, refrigerators, and freezers, it was reported here recently.

The report said that Norris-Thermador, if the purchase were consummated, would operate Lindemann & Hoverson as a subsidiary, leaving present management intact.

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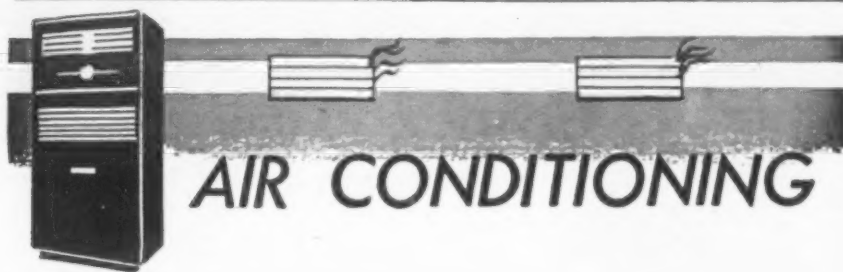


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### People Won't Patronize Restaurants Without It

## Restaurant Operators Place Air Conditioning First on List of 'Most Wanted Features'

By George M. Hanning

PEORIA, Ill.—The most important feature that restaurant operators want this year in this area is air conditioning, declares Fred Kenyon, restaurant equipment dealer here.

Restaurant operators are finding that people won't eat in their places unless they have air conditioning, he said. Though there has been little demand for air conditioning in restaurants before this year, he declared he has already made several installations in 1953 and has more on the books. Kenyon, Inc. handles the Frigidaire line of air conditioning.

Kenyon also noted that there are three other trends of increasing significance to the restaurant equipment dealer. They are:

#### LABOR-SAVING EQUIPMENT NEEDED

1. A definite awareness on the part of restaurant operators of the need for labor-saving equipment—equipment that will enable them to serve their clientele with fewer employees.

2. The growing market for cafeteria equipment in new industrial plants that are moving out to the suburbs.

3. The need for the restaurant equipment dealer to carry a large inventory and floor display of the equipment he handles. Restaurant operators will buy where they can get immediate delivery and do not have to wait for the dealer to order a unit from the factory. This applies to everything from toasters to deep-fat fryers and wishwashers, he declared.

The need for labor-saving equipment, Kenyon said, is becoming increasingly important for several reasons. Not only is competent help hard to get, but union requirements keep labor costs high. Not only are there sliding scales of wages depending on what operations the employee is expected to perform, but employees will not work unless guaranteed a certain number of hours of work per day.

Because the restaurant business operates on a margin nearly as low as the food retailing business, about the only way the restaurant operator can cut costs is to invest in labor-saving equipment.

#### SHORT-ORDER UNITS SPEED SERVICE

As an example, Kenyon said, one of the most popular items he has for small restaurants is a short order and food preparation counter, where cooking is done right out in the dining room. This permits one person to act as fry-cook and wait on counter trade at the same time—such as is done in the dining-car type of operation. This helps eliminate the kitchen and gives the restaurant nearly as speedy a turn-over as a cafeteria.

In addition, the restaurant employee has close contact with the customer to a greater extent than in almost

any other business. He influences the customer's attitude toward the restaurant. If the employee should be out of sorts for any reason, he quickly imparts that feeling to the customer. So, the fewer employees contacting customers the restaurant operator has, the better.

As for industrial cafeterias, many plants are now installing them whether they want to or not. When they move out to suburban areas there are not enough restaurants nearby to take care of their employees. Sometimes there aren't any at all.

So the factory is forced to put in its own cafeteria.

In some instances, the management

may not want to invest in a cafeteria, but the union will demand one as part of their work contract, Kenyon declared.

In other cases, the management finds it very advantageous to install its own cafeteria. Plant supervisors have discovered that, on paydays particularly, some men will go to bars during lunch hour. After hoisting a few, they won't want to go back to work. Then the company loses valuable production, which could be saved if it provides a place in the plant for the men to eat.

Another factor not mentioned by Kenyon, but mentioned by one of his industrial cafeteria customers, is that it enables the plant to save production time.

With its own cafeteria, this particular company lets half the office force off at one time and allows them a half hour for lunch. When the first half returns, the remainder take their half hour. Thus in one hour's time, the entire force is fed and no one has had to rush his lunch.

By taking only a half hour for lunch, the employees get an extra 15 minutes to get to work in the morning and get off 15 minutes earlier in the evening. They like that.

Kenyon's display floor is now crowded with restaurant equipment of all kinds. A few years ago, he noted, one would not have seen so much equipment out in the open—it would not even have been carried in stock.

But, says Kenyon, we have devel-

oped considerable floor traffic among restaurant operators. They come in for one thing and see another that they want. Or they see something they need as they pass by on the street. Then they will come in and want to buy it right off the floor.

"I find it smart, now, to carry a large inventory on the floor. My customers don't want to wait for me to order a piece of equipment from the factory."

"A few years ago, I would have sold this stuff from a catalog and ordered the actual equipment as I sold it. But not now. I even have a commercial dishwasher displayed on the floor. And packaged store air conditioners, too."

### Wins Heating-Cooling Contract For N. C. Drive-In Bank

GREENSBORO, N. C.—Contract for the installation of air conditioning and heating equipment at Guilford National Bank's new drive-in branch at West Lee and McCormick went to Commercial Sales & Service on its low bid of \$4,220.

### Airtemp Dealer Appointed

PINE BLUFF, Ark.—Central Heating & Air Conditioning Co., 502 Fifth St., has been appointed authorized Chrysler Airtemp dealer for south-east Arkansas.

### Tri-State Area Dealers Get Story on UsAirco Products

EVANSVILLE, Ind.—More than 85 dealers from the southern Indiana Tri-State area attended a recent luncheon sales meeting sponsored by Plumbing & Industrial Supply Co., of Evansville, new United States Air Conditioning Corp. distributor.

The meeting was addressed by Mel Clemans of the distributing firm, R. D. McLain, sales manager of the UsAirco packaged refrigeration division, and H. E. Culley and M. D. Puckett, of H. E. Culley & Co., UsAirco representative.

UsAirco equipment, including a 5-ton upright store-type conditioner, a 5-ton home air conditioner, and a ¾-ton window-type room cooler, were displayed along with two E. D. Goodfellow cooling towers.

The main portion of the meeting was devoted to a discussion of the design, construction, and applications of this equipment. The dealers also saw a color film depicting the manufacture of UsAirco room air conditioners.

### Coleman Names DeWitt

NORTH LITTLE ROCK, Ark.—Joe DeWitt Co. here has been named exclusive distributor in Arkansas for the Coleman line of air conditioning and heating equipment.

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## Designing a Freezer?

Controversial Question of Upright vs. Chest, Numerous Other Problems Aired at ASRE Domestic Conference

By C. Dale Mericle

LAKE PLACID, N. Y. — Many phases of freezer design, including the controversial question of uprights vs. chests, received an airing at the Domestic Refrigerator Engineering Conference held during the 40th semi-annual meeting of the American Society of Refrigerating Engineers here.

The following summarizes major points made by the 10 speakers, who discussed such topics as finishes, insulation, liners, vapor barriers, steel freezer coils, sweating, system design, and the chest-upright subject.

### CHEST OR UPRIGHT?

"Eight years ago if this comparison of the chest and upright freezer had been carefully considered, the chest type freezer would have been avoided," declared L. M. S. Cooper of Amana Refrigeration, Inc.

"The logical design was the upright freezer—as an adjunct of the household refrigerator—but most manufacturers who started in the business almost succumbed to the theory that the chest type freezer was the true freezer."

This decision, Cooper said, was based solely on the question of air spillage.

"Perhaps we were too busy building chest types to work on the upright. But now 25 companies are manufacturing uprights who as recently as six months ago made only chests."

Comparing the two types on such

factors as location, cost, etc., Cooper suggested: "The best location is one to conserve the user's time and energy—that is, in the kitchen."

In this connection, he said that a 12-cu. ft. chest takes 63% more floor area than a 12-cu. ft. upright; a 25-cu. ft. chest, 82% more area than an upright of the same capacity.

"The chest type does offer the advantage of shelf space on top, but this means you have to remove everything off the lid to open the freezer."

"From the standpoint of cost, there is 10% greater wall area in a 25-cu. ft. chest freezer as compared with a similar sized upright. This also means 10% more insulation," Cooper emphasized.

### NOISE LEVEL TO BE CONSIDERED

Another factor to be considered when locating the freezer in the kitchen is its noise level, he indicated.

"There hasn't been as much attention given to this as in the household refrigerator, but we have achieved noise levels comparable to that of the household refrigerator. Here the condenser fan tip speed is the problem. We've lowered the fan speed to improve the noise level and have compensated for this by increasing the condensing unit size slightly."

As for accessibility, Cooper contends that "baskets to improve accessibility of the chest type reduce its useable space."

Cooper also discounted the effect of air spillage on the upright.

"The temperature effect of cold air spillage is negligible—less than a 1° rise for normal door opening."

He cited other tests to determine the increase in power costs for both chest and upright models when the freezer door was opened for 60 seconds once per hour in an ambient of 90° F. and 76% relative humidity. According to Cooper, the increase in operating cost totaled 77¢ a year for the chest, \$1.51 for the upright.

### UPRIGHT REQUIRES RIGID DOOR

"One of the problems in an upright," he admitted, "is the necessity for a relatively rigid door. In a chest type freezer, this doesn't matter."

"The ultimate design of the upright now seems to be refrigerated shelves with additional shelves in the door. In the chest you can't get as high transfer rates as in the upright equipped with freezer shelves," Cooper also asserted, citing tests which he said proved that foods freeze faster on the shelves of an upright than in a chest.

"There is also a more even temperature gradient from top to bottom in an upright than in a chest freezer."

Cooper summed up his views of the chest type freezer with two slides showing its "ultimate use" as a bathtub.

Additional support for the upright came from another speaker, G. J. Fleck of the Coolerator Co., who commented that "only in the past few years has the upright come into its own."

"The early uprights were designed around household refrigerator cabinets rather than as freezers and thus had limited capacity."

Increasing popularity of home freezers led to larger and larger sizes, a trend which also helped the upright, indicated Fleck.

"Improved insulation, better use

of insulation, and increased door gasket area" were cited by Fleck as major factors in improving the upright.

"The upright has also reduced heat loss through insulation by using a refrigerating means remote from cabinet walls in contrast to most chest types which have evaporator tubes in the freezer wall."

"There is also less temperature difference between interior air temperature and the liner of an upright than in a chest. Temperature of the liner in the chest is approximately that of the refrigerant. This means that the upright tends to have less running time."

"Tests have shown," Fleck asserted, "that there is more air spillage when the door is opened in a chest than in an upright. Much depends on the design of the upright, however."

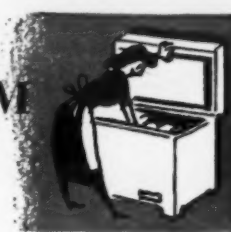
Rate of pull-down of an upright compares favorably with the chest, Fleck declared, but he pointed out that "freezing time of an upright can be a problem because of its greater freezing area."

"In high ambients this can result in frequent tripping of the overload. Below 90° ambients, however, the upright gives faster freezing."

"Condensation can be a problem on uprights as well as chests, but this



## HOME & FARM FREEZERS



can be solved in each case."

According to Fleck, tests on freezers of comparable capacity have showed "slightly less running time for uprights than for chests."

### EVAPORATOR COILS

Reviewing the experience of Crosley in its use of steel tubing for freezer evaporator coils, R. E. Cappel of the company told the conference that "satisfactory results" had been obtained in most recent applications, but "the cost of inspection, etc., runs the steel tubing cost up to very nearly that of copper."

According to Cappel, Crosley had experienced failures due to corrosion with this tubing in "kitchen freezers" built early in 1947, but "during the recent material shortages, we returned to steel tubing again."

Improved methods of protecting the tubing against moisture proved satisfactory, but raised its cost, he declared.

"Corrosion occurs early and rapidly when the tubing is bare and exposed to moisture," Cappel said, explaining that this apparently happened in the 1947 models because cracks developed in the hydrolene coating. Cause of this, he implied, was that

the freezers were subjected to varying temperatures: (1) not operating during shipment, (2) sometimes being run at above freezing temperatures, (3) being turned off completely during vacations.

"We must assume that the freezer will be turned off at some time; we know that hydrolene alone doesn't provide a protective coating over a long enough time; and that the coating used must be flexible over a wide range of temperature."

"Low temperature will inhibit the start of corrosion but not after corrosion has started," Cappel declared, also pointing out that "residual moisture in the insulation is enough to start corrosion" once the bare tubing is exposed.

### INSULATION PROBLEM

Discussing the question of insulation in home freezers, L. E. Cover of Armstrong Cork Co. expressed his view that "we have cut down too much on insulation on doors and lids."

He made such other points as:

"When the insulation space is sealed completely, we get the longest life and the best efficiency;

"Today, the old compressor-to-

(Concluded on next page)

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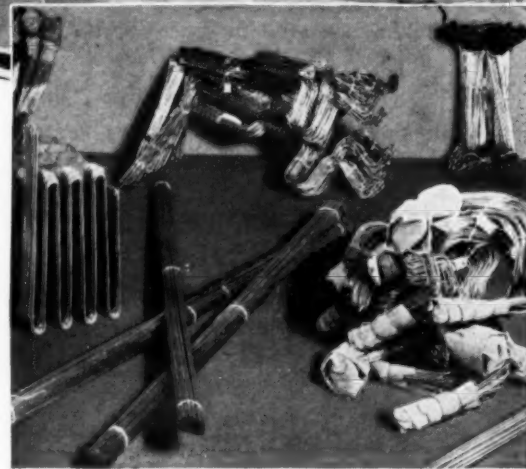
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## Designing a Freezer?--

(Concluded from preceding page)  
insulation ratios are obsolete;

"More insulation is required when evaporator coils are used in the walls of the liner;

"A better insulation job can be done with a chest type freezer, but the upright permits using the same dies and fixtures as for a household refrigerator with better insulation;

"The quality of freezers has been steadily improving, and it is essential that we maintain and improve these high standards."

### CHOOSING A LINER

"Choice of material for the inner liner of a freezer is a very controversial subject," commented R. B. Farnon of General Electric Co., who said that liner selection involves three major considerations:

1. Performance.
2. Appearance.
3. Fabrication and assembly.

"The vertical type freezer places more emphasis on appearance than does the chest, but because the uprights generally use refrigerated shelves, they have less problem in the thermal performance of the liner than does the chest," he suggested.

Choice for liner material is reduced to steel or aluminum, Farnon said, although he pointed out that plastic liners may be a consideration in the future.

G-E is using the aluminum liner because it has several advantages over steel and is cheaper, he indicated. The steel liner has a slower heat

transfer rate and has resulted in longer compressor running time, and is also heavier and stiffer than aluminum.

"The factory, however, finds that steel draws better, welds better, and repairs easier than aluminum, but we've had good field service experience with both steel and aluminum freezer liners," Farnon declared.

### IMPORTANCE OF FINISHES

Finishes for freezer liners and shelves have become more of a problem, according to O. J. Spawn of E. I. duPont de Nemours & Co.

"In the old days it was an easy matter to finish a freezer, because it was merely a question of protecting it. Now the designer wants one thing, the production man another," he said.

Explaining why blisters sometimes develop on painted surface, Spawn reminded the group that "a paint film is relatively porous. If vapor going through the paint encounters water-soluble salts, the vapor pressure of the solution formed will be less than that of pure water. Water is forced into this pool which forms a blister that grows in size until it reaches the condition of equilibrium."

Most blistering, he said, occurs at the metal surface or between coats of the finish, but good adhesion qualities of the finish will reduce corrosion possibilities.

Maximum corrosion of freezers occurs in shipment or at resort areas where the freezer is turned off for

some periods of time. The rust growth at 0° is only one-thirtieth as fast as at 100° F."

Spawn also cited data which showed that the vapor pressure within a normal freezer compartment amounted to .94 mm. of mercury at 0° F., but was up to 64.8 mm. at 110° F.

There is little trouble in coating aluminum and zinc substrates, according to Spawn, who offered some suggestions regarding the problems of welds in cold-rolled steel.

"We're against the use of spot welds," he said. "You can't get a good finish inside the welds and on the corners. Mash-seam welds are better, provided the shoulder is ground off. Flush type welds are much better."

As for freezer shelving, use of non-rusting metals is best, he suggested.

### PREVENTION OF SWEATING

"The number of manufacturers producing an anti-sweat freezer indicates this is becoming the rule rather than the exception it was three years ago," said R. L. Eichorn of International Harvester Co. "The prevention of exterior sweating of freezers is becoming more important as the freezer comes into wider use."

It is not practical, he indicated, to design a freezer that won't sweat in relative humidities of 98%, but up to this point there are several design possibilities.

"The breaker strip and door gasket are critical spots, so air circulation over the breaker strip should be kept to a minimum," Eichorn declared.

Adding of heat to the outside of

the freezer will prevent sweating, and the "use of heat of condensation by means of a wrap-around condenser coil is a practical answer," he commented.

This, however, brings up the problem of attaching the condenser coil to the outer shell and raises the question as to whether an auxiliary condenser may be needed, Eichorn also said.

### MASS MERCHANDISING

"The secret of mass merchandising is to have the right goods at the right time at the right price," Gilbert Strunk of Sears, Roebuck & Co. told the conference in reviewing Sears' experience with home freezers.

Recalling that "Sears got into freezer selling by accident in 1939," Strunk said that "except for two brief periods, we've had more customers than freezers."

Questioned as to what specific things the freezer customer requires today, Strunk commented: "The thing we've got to strive for is ending sweating. Performance and running time may become the next problem."

"It's also time for us to get out and talk to customers again the way we did in our 1943 consumer survey."

### 'UNIQUE' SYSTEM

Programmed to discuss "Some Unique Features in Home Freezer Design," J. A. McLean of Westinghouse Electric Corp. described the Westinghouse upright which employs a secondary system of tubing wrapped around the inner liner. Primary evaporator is of U-shaped design extending full width of the freezer at the top.

"When our work started 15 years ago we wanted to retain the advantages of a hermetic system, and we decided the upright freezer offers the same advantages of the upright household refrigerator," McLean said.

But having an evaporator at the top only, it was found, required extremely low refrigerant temperatures and further resulted in poor air circulation, and poor temperature distribution, he revealed.

"Wall cooling seemed the answer." Although cycling of the unit produces some temperature fluctuation of the primary evaporating system, the secondary system tends to even out these fluctuations, according to McLean.

Among the advantages claimed for this design is that "all frost migrates to the primary evaporator. This minimizes the danger of frost accumulation in the insulation, and also permits the freezer to be defrosted in a manner similar to the household refrigerator," he explained.

In answer to a question on preventing frost accumulation on interior door hinges, McLean commented that "We have a point of low vapor pressure—the evaporator—which collects frost. Frost does form on the hinges but it soon sublimates with normal door opening. In freezers using plates, the frost would migrate to the plates. As far as I know, there has been no trouble on this in the field."

### VAPOR BARRIERS

"Vapor Barrier in Chest Type Freezers" was a topic discussed by H. Mortensen of Deepfreeze Division, Motor Products Corp., who reviewed studies to determine vapor pressures in various parts of such freezers.

At the conclusion of the conference,

R. W. Ayres of Seeger Refrigerator Co., who was chairman, emphasized that the "outer shell must be completely sealed, regardless of what type of system you use."

"Where the entire refrigerating tubes are within the freezer area, it's an advantage not to seal the breaker strip so the insulation can breathe to the plates which are inside the freezer."

### Deepfreeze Shipments Up 51% In Last 12 Months

NORTH CHICAGO, Ill.—Unit shipments of the Deepfreeze Appliance Div., Motor Products Corp., for the fiscal year ending June 30, this year, were about 51% higher than the division's last fiscal year, it was announced at the recent annual meeting of directors.

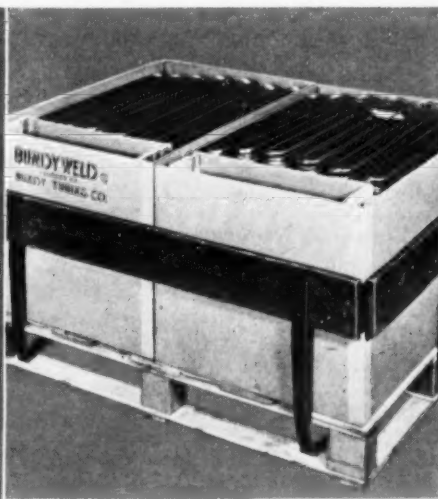
The increase in shipments reflected higher sales of all Deepfreeze products, which include home freezers, refrigerators, electric ranges, and water heaters, according to L. J. Sorensen, vice president of Motor Products and general manager of Deepfreeze.

Sorensen told the directors that the Deepfreeze \$1,500,000 expansion program at Lake Bluff, Ill., has been completed and the additional production facilities there would be ready for use by the first of July. The expansion gives Deepfreeze a production potential of 600,000 home freezers and refrigerators annually.

With these added facilities, it is claimed that Deepfreeze will be the world's largest manufacturer of home freezers.



Package custom-engineered by Bundy for 129" multiple-bend condenser coils uses diagonal divider in one-component pack. Fitted corner-inserts help reinforce package for shipping and storing, prevent coils shifting. You stack these packages with ease, speed; parts inventory area is smaller, no longer a tangled confusion. Expendable pallets are four-way-entry.



Best shipping, storage efficiency is gained by sizing corrugated components exactly to different Bundyweld parts. Eleven styles are used, ranging from 23 1/2" x 17 1/2" x 10" up to 47 1/2" x 35 1/2" x 32". Components carrying these condenser coils are fitted with inserts to prevent shifting or bouncing inside the package, fit squarely on 36" x 48" pallet.



Care taken in Bundy packaging, delivery is seen in palletizing of four-component pack of discharge tubes. When top corrugated kraft cover is unstapled, each component is ready for use, tubes not tangled but in shape for instant extraction and integration into your assembly operations. Corner-inserts help reinforce package in shipment, increase stackability.



Shorter straight-length Bundyweld, as well as fabricated parts, is now shipped in multiple-component (every one certified by 275-600 lb. test) packs. These 1/4" refrigerator tubes extract more handily, store more economically in new pallet packs than in old-style loose bundles. Tubing bore stays absolutely clean, ready for use without additional flushing or other cleaning.



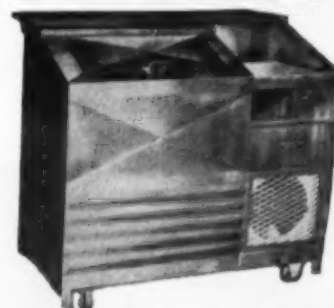
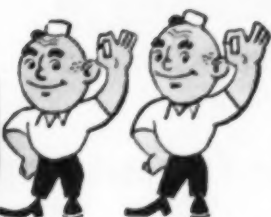
Custom-engineered packaging adapts deliveries to exact needs. For storage and production flow on multiple-shift basis, a customer needed small, easily handled components that could be taken from pallets individually. Solution: six-component pack, units banded to pallet without stapling. Corrugated cover for whole pack defeats shifting problem, adds protection.



Bundyweld fabricated parts or straight-length tubing can be used with efficiency directly from shipping package. On shipments for local area customers, Bundy's own truck fleet delivers the order right on schedule in heavy-duty, steel returnable containers with sliding side panel. Fatigue, time loss are cut as condenser coils are extracted without bending, stooping.

# Bundyweld Tubing

DOUBLE-WALLED FROM A SINGLE STRIP



### DRINKMASTER

PORTABLE — REFRIGERATED  
Stainless Steel HOMEBAR  
PLASTIC CHARTREUSE FRONT  
BLACK TOP

Mfd. by

United Refrigerator Engrs.  
Menominee, Mich.

Write for free 8" x 10" Photos

**NOW YOU CAN COMPETE!**

... here's your EXTRA PROFIT line of  
**\* ECTRIK-ICE**

**WATER COOLERS**

YOUR LOW PRICE  
**\$129.00**

\*TRADEMARK  
REG. U. S. PAT. OFF.



MODEL E-550 SHOWN

UNIFLOW offers a Complete line of LOW COST Water Coolers designed for dealers EXTRA PROFITS and Customers satisfaction. Write for a FREE "Extra Profits" brochure."

**UNIFLOW**  
MANUFACTURING COMPANY  
1513 East Lake Road  
ERIE, PENNA.

"A Leader In The Water Cooler Field For Over 20 Years"





## specialty SELLING METHODS

### Single-Line Dealerships

**Harry Alter Predicts That as They Become More Common There Will Be Less Price Cutting and More Profit for All**

CHICAGO—"There is much to be said in favor of single-line dealerships and not much to be said against the idea. But whether we like it or not, it seems to me that the trend in that direction is developing rapidly and it is likely to snowball before very long.

So declared Harry Alter, president of The Harry Alter Co., Chicago distributor, at the mid-year meeting of the National Appliance & Radio-TV Dealers Association. Leading up to this point in discussing dealer-distributor relations, Alter noted that the dealer is often blamed by distributor and factory sales people for the failure of sales campaigns.

"I'm always amazed at these criticisms by people who either don't think or who are poorly informed," he said. "I know of no harder way to make an honest dollar than that of running a retail appliance store.

"The busy dealer is harassed with dozens of different duties and details, all of which are handled at the distributor and factory level by spe-

cialists. . . . And all of these varied duties and functions must be done extremely well, even expertly, or else he'll go broke because the game is so competitive.

"I am not saying this because I seek sympathy for the dealer or because I think he wants to be sympathized with. It's a free country, nobody forced him to be a dealer, and if he doesn't like it he would be wise to get the hell out of it.

#### Blame for Sales Campaign Failures Must Be Shared

"But what I would like to suggest is that instead of laying all the blame for a sales campaign gone flat at the dealer's door, maybe a little self-scrutiny by the manufacturer and the distributor might cause the latter two to accept more responsibility for its failure.

"Better still, some clear thinking on the part of all segments of the industry might improve the lot of everyone in it. Certainly, passing the

buck accomplishes nothing; the post-mortem alibi is a sheer waste of time.

"What really should the factories and distributors do to help dealers? What can they do? Let's start out by talking first about what can't be done and what's wrong with the business.

"1. There are too many manufacturers, too much production, too many distributors, and far too many dealers. And not a damn thing can be done about it except the workings of the oldest law of nature, 'the survival of the fittest.'

"2. There is too much price cutting by too many dealers. Price cutting on big-ticket items is too easily disguised by a subterfuge called the 'trade-in allowance,' so that fair-trade price maintenance seems like an impossibility to me.

"Price cutting is often exaggerated. A dealer offering 20 off on TV sets sold a \$299.95 set for \$279.95—he just took \$20 off and customers seldom knew the difference.

"3. Everyone is trying to load up

everybody else. The factories cram it down the throat of distributors who, in turn, try by every known gimmick to load up the dealer on the theory that if he is overstocked, he can't buy from competitors and so he'll have to cut prices and work like hell to unload and pay his bills.

#### Overloading Dealer Leads To Price Cutting

"Overloading the dealer is the greatest price-cutting incentive ever invented and so are trips to Florida, cruises to the Caribbean, and flights to Europe.

"4. All retail advertising and sales campaigns too often feature lowest prices or bigger trade-in allowances or no money down or 25 cents a day or free installation or free premiums or just outright discount offers. Seldom do we see advertisements in our daily papers telling a product feature story—why someone should buy it.

"5. Principally it boils down to a widespread frame of mind on the part of dealers and distributors that the only business obtainable, the only order that can be secured is from someone who is ready to buy, so get the order from him quick before your competitor does. No use telling him about the product; he must already know or else he wouldn't be ready to buy.

"Now let us see what is good about the business, what can be done to improve it over both the short and long pull.

"First, about too much competition, I think that most left-handed dealers are getting out of the business pretty fast. I call a left-handed dealer one who is principally in other lines like auto supplies or hardware or jewelry or farm implements and who has been dabbling in appliances and TV with his left hand, so to speak.

"This type of dealer is wise to get out because he can't make a go of it nor can his suppliers afford to waste time on him any more.

#### 10% Likely To Drop Out for Financial Reasons

"In addition, my guess is that another 10% will leave because of financial reasons, either because of failure or fear of failing. Yes, dealer ranks are thinning out.

"Also, you may not realize it but distributor and manufacturer ranks are likewise becoming thinner and this new trend is on the increase. Mergers, consolidations, and acquisition by purchase is today's vogue.

"What's back of it is, of course, the desire of every big-name company to offer a full line to his dealers. So when two or three companies merge into one, there are usually one or two distributors cancelled out and one brand name ultimately is adopted for all products.

"You'll eventually see in this country about 10 big-name, complete-line national brands, with all others either out of the picture or relegated to a position of unimportance.

"As dealer ranks thin out, and as manufacturers' lines of products become broader and more complete, the day of full-line and exclusive dealerships will not be far off. As a matter of fact, it is not far off now, and smart dealers will start shaping their affairs for the day when they will become exclusive dealers of one complete line, obtaining along with such franchise, reasonable territory protection.

"Under such an exclusive setup, make no mistake, competition will be as fierce as ever. Automobile dealers, who operate on exclusive franchises, will most certainly testify to that. But this competition is of a different kind from what we have today in this business.

"There is probably nothing as frustrating as when a customer shows you a \$50 price cut on the identical model number and brand name TV set you have just finished demonstrating to him. In most towns and shopping centers of large cities, automobile dealers get their competition from other makes and so have a chance to do a product selling job . . . but you can't do that with TV, for instance, when every dealer in town has your identical lines.

#### Profit Margins Should Improve with Better Selling

"Thus, while we'll always have price competition, I am confident that to a great extent, better selling will improve profit margins for those dealers who have exclusive and protected full-line dealerships.

"Not only can you do better selling but you can again resume crea-

tive selling—promotional activities designed to create a desire in your customer to buy. Probably the one thing that this industry is in most need of is creative selling.

"Manufacturers will have to liberalize and make more flexible their co-op advertising deals for the benefit of across-the-board, full-line dealers.

"No two dealerships operate exactly alike. One has a high-rent, big-traffic location, spends his money on expensive window displays and point-of-purchase advertising. Another runs a big outside sales crew requiring elaborate sales supervision. Still another has a low-rent location with good parking and spends a high percentage of his sales in advertising.

"The first two examples get no advantage from co-op funds, while the latter can go overboard using some of the unexpended funds accrued by the first two.

#### Suggests Subsidizing Expenses Other Than Advertising

"I think if we are going to subsidize advertising for dealers, we should also subsidize outside selling or excessive rentals or other similar expenditures related to sales. It seems to me that it is unfair to cooperate only with newspaper advertising. . . .

"Dealers carrying one line exclusively can do a better selling job because they can develop genuine sales enthusiasm for their products which they are somewhat fearful of doing as long as they have competing merchandise on the floor. . . .

"Of course, such exclusive dealers would have to steel themselves to tell customers who are asking for an XYZ range that they only handled their one brand; conceivably they might occasionally lose a sale, but in the long run they should sell more units at better prices with more profit. . . .

#### Dealer Would Get More Distributor, Mfr. Help

"A great many men are fearful of putting all their eggs in the one basket, while others go on the theory it is OK to do so if you watch the basket. Watching the basket could free up some capital now frozen in multi-line inventories as surely less investment is necessary when handling but a single line. Freeing capital with less inventory puts more money in the bank, less worry, and fewer sleepless nights.

"As an exclusive dealer you certainly would get more real help and cooperation from the distributor serving you. He can now afford to support your every sales activity, confident that those sales you make will always be for his products."

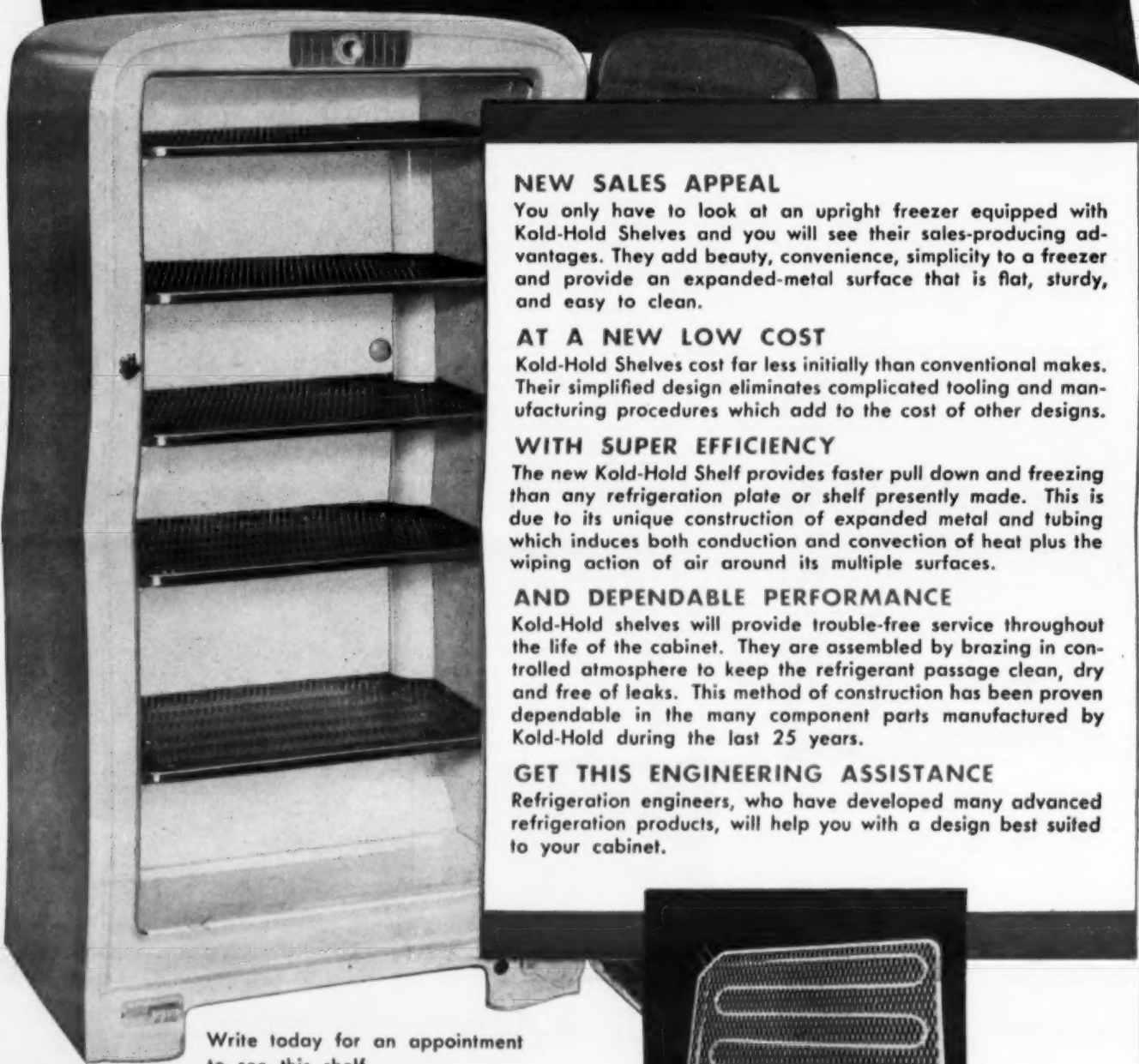
#### Norge Appoints Newell Field Representative

CHICAGO—Appointment of John D. Newell as a field representative for Norge Div. of Borg-Warner Corp. was announced recently by H. L. (Red) Clary, vice president in charge of sales.

Newell will be headquartered in Minneapolis. His territory includes Minneapolis, Sioux, Omaha, and Fargo.

## UPRIGHT FREEZER SALES INCREASE

with the NEW KOLD-HOLD Freezing Shelves



#### NEW SALES APPEAL

You only have to look at an upright freezer equipped with Kold-Hold Shelves and you will see their sales-producing advantages. They add beauty, convenience, simplicity to a freezer and provide an expanded-metal surface that is flat, sturdy, and easy to clean.

#### AT A NEW LOW COST

Kold-Hold Shelves cost far less initially than conventional makes. Their simplified design eliminates complicated tooling and manufacturing procedures which add to the cost of other designs.

#### WITH SUPER EFFICIENCY

The new Kold-Hold Shelf provides faster pull down and freezing than any refrigeration plate or shelf presently made. This is due to its unique construction of expanded metal and tubing which induces both conduction and convection of heat plus the wiping action of air around its multiple surfaces.

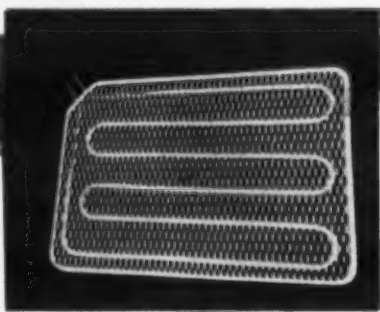
#### AND DEPENDABLE PERFORMANCE

Kold-Hold shelves will provide trouble-free service throughout the life of the cabinet. They are assembled by brazing in controlled atmosphere to keep the refrigerant passage clean, dry and free of leaks. This method of construction has been proven dependable in the many component parts manufactured by Kold-Hold during the last 25 years.

#### GET THIS ENGINEERING ASSISTANCE

Refrigeration engineers, who have developed many advanced refrigeration products, will help you with a design best suited to your cabinet.

Write today for an appointment to see this shelf.



**KOLD-HOLD**  
DIVISION

**ranter Manufacturing, inc.**

500 E. Hazel Street, Lansing 4, Michigan

**Demand IS FOR**

**CLEANABLE WATER-COOLED CONDENSERS**

**1 1/2 to 25-Ton Capacity**

**MORE EFFICIENT DOUBLE-TUBE COUNTER-FLOW DESIGN**

"New unit" efficiency is always maintained with H & M water-cooled Condensers because they are **cleanable**—quickly, economically. Do as the industry does—demand nothing less, for the cost is no more. Write for Catalog.

WHOLESALE IN PRINCIPAL CITIES

**Halstead & Mitchell**

BESSEMER BLDG. • PITTSBURGH 22, PA.



## Refrigerated Ammunition Storage Cabinets

**Portable Boxes  
Will Aid Study  
Of Effects of  
Extreme  
Temperatures**



MADISON, Ind.—Eight new portable extreme-temperature conditioning boxes soon will be on the firing line alongside the big guns at Jefferson Proving Ground here.

Designed to store ammunition at temperatures ranging from -100° F. to 200° F., the huge boxes will aid the Army in studying the effects of temperature on the behavior of projectiles and small arms ammunition.

Because of the urgency for these chambers, the manufacturer, Tenney Engineering Inc., Newark, N. J., assigned them a high production priority and shipped four units within 42 days after receiving the order.

The remaining four were shipped 13 days later. According to S. B. Sternbach, project engineer, the first two chambers were not scheduled to be delivered until 60 days after receiving the contract.

### CONTROLS ARE AUTOMATIC

In operation, the 60 in. wide by 48 in. high by 108 in. long, 3,350-lb. chambers will be hoisted onto trailer trucks with sling and crane and hauled to designated firing locations. Here they will be unloaded, plugged into a 115-volt, 20-amp. power supply and automatic controls set to maintain desired temperature conditions.

When low temperatures are desired, dry ice is placed in containers located in a partitioned-off compartment in the rear of the chamber. An automatically-controlled damper built into the partition regulates chamber temperature by allowing more or less air to circulate around the ice, depending upon whether the temperature within the conditioned space is to be raised or lowered.

### DRY ICE USED

The chamber will reduce the temperature from 90° F. to -70° F. in 45 min. and hold at this temperature for 18 hours without additional dry ice, far exceeding contract specifications.

Tenney Engineering also has shipped two 12-cu. ft. portable dry ice storage boxes and two 54-cu. ft. boxes. The small boxes will be used to transport ice from the large stationary boxes to field locations.

Heating is accomplished by electric heaters also located to the rear of the chamber. Air is circulated around the heaters as in the case of the dry ice. Thermostatic controls turn the heaters on and off as the chamber temperature falls below or rises above the set value.

Six stainless steel expanded-metal

shelves are provided within the chambers. Between the shelves and the two main doors, which are designed to provide full access to the work space, are four auxiliary doors, each covering one quarter of the entrance. These doors allow sections of the box to be reached without subjecting the entire compartment to the outside atmosphere.

### EXPLOSION OPENS DOORS

The main chamber doors are so engineered that in case of an internal explosion they will open freely. All construction materials are non-flammable. The chamber is so constructed that vibration and shock caused by gunfire will not affect its control.

All elements of the chamber are weather-proof for outdoor use; exterior and interior are of stainless steel. Insulation is 6 in. thick and so installed that gunfire or transportation will not shake it loose. Lugs are provided so that sling and crane can hoist the box on and off trucks.

## Super-Cold Corp. Opens San Francisco Office

LOS ANGELES—The Super-Cold Corp. announces the opening of a new branch office in San Francisco which will service the general San Francisco-Oakland area.

D. K. Schick, district sales manager for Super-Cold's general offices in Los Angeles and the San Diego office, will also supervise sales for the new San Francisco branch.

Edward J. Clark will be manager of the new branch. Mr. Clark was formerly affiliated with Charles Brown Hotel Supply Co. and Silver-Stahl Corp. in San Francisco, and before that was in business for himself. He is a graduate of the University of Santa Clara.

Super-Cold, which has offices in all principal cities in the United States and in 36 other countries throughout the world, is a producer of commercial refrigeration cases of all types, including self-service display cases and walk-in, reach-in equipment.

### HOT DOG!!!

FOREST CITY, N. C.—The Forest City Sausage Co. has begun construction of its new \$75,000 plant on Highway 74 at Broad River bridge. It will be air conditioned.

Manager Boyd McDaniel says the new plant will have about 9,000 sq. ft. of floor space, or about four times the size of the present West End plant. It will feature all operations necessary to the processing and packing of meats.



## Pacific Fruit Express Adding 25 Cars To Handle Frozen Food Shipments

OMAHA, Neb.—The first 14 cars in a fleet of mechanically refrigerated railroad cars under construction at the Pacific Fruit Co. shops at Roseville, Calif. are now rolling frozen foods to markets, it was announced recently by K. V. Plummer, vice president and general manager of the company.

First of these 14 cars was loaded in Oregon early last month, Plummer said. Another 11 such cars, to make a total of 25, are scheduled for completion early in July, with 100 more ready for service early next year, he added.

Pacific Fruit Express, which is owned jointly by Union Pacific and Southern Pacific railroads, describes the cars as "supergiants," longer than conventional ice refrigerated cars and with insulation 50% thicker.

They are designed especially for frozen foods, and are capable of maintaining zero temperatures with mechanical refrigerators powered by individual diesel engines mounted in

a compartment at one end of cars. All of the new cars now in service were made available for loading immediately after their construction at Roseville. Some are carrying their loads thousands of miles without having to make any stops for servicing the refrigeration equipment, other than to inspect and fuel the engines, Plummer said. He emphasized, however, that the new type refrigeration is still in the experimental stage.

Need for special cars to handle frozen foods is shown by the increasing volume of this type of business, Plummer pointed out, reporting that carloadings of frozen foods have nearly doubled in five years in the territory served by Pacific Fruit Express. Indications are that the trend will continue, he predicted.

Pacific Fruit Express owns and operates the largest fleet of railroad refrigerator cars in the world.

## Carrier Cincinnati Office Moves To Woodburn Ave.

CINCINNATI—The direct and dealer sales office of Carrier Corp. here has been moved to 2904 Woodburn Ave., Ed Hatfield announced recently. The new quarters provide expanded facilities. Telephone number is Capitol 3100.



New CM Model Featherweight Tite Seal Door—the door that is



CLEO M. LINGLE, President  
Lingle Refrigerator Co., Inc.

**No. 1 GUARANTEED  
for 5 Years  
Not to Warp**

**No. 2 LIGHTER WEIGHT  
(Only 100 Lbs.)**

**No. 3 Manufactured  
ONLY by the  
Original *Single*  
Refrigerator Co.  
of Kansas City, Mo.**



DALE NEAL  
Vice-President



EVERETT H. WHITE  
Sales Manager

This Lingle Cold Storage Door is a complete new departure in the designing and engineering of cold storage doors... a door years ahead in construction. Never before anything like it! Easier to install... easier to open... easier to shut... and it costs you less.

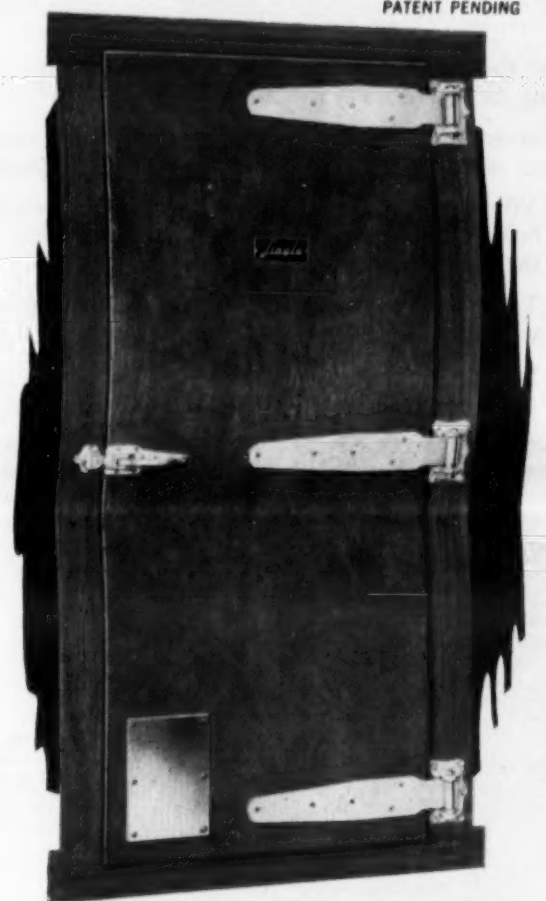
The scales tell the story:

Lingle Door.....100 lbs.  
Ordinary Door .....138 lbs.

The Lingle Door is built of layered ma-

rine plywood, backed by board-type Fibreglas with double gasket seal. Carries a 5-year guarantee against warping! Comes complete with frame. Door is hinged at factory. Metal threshold, stainless steel kick plate, exclusive-design door braces... modern to the minute!

GET ALL THE FACTS on this door that does a better job at lower cost. Right now fill out and mail coupon for Free Illustrated Booklet giving full details.



**Distributor Territories Open  
Get All the Facts  
Send Coupon Now!**

**Lingle REFRIGERATOR CO., Inc.** 1700 Truman Rd. KANSAS CITY, MO.

Without obligation please send me Free Illustrated Booklet on the New Lingle Cold Storage Door...also name of LINGLE representative nearest me.

NAME \_\_\_\_\_  
COMPANY \_\_\_\_\_  
STREET \_\_\_\_\_ CITY \_\_\_\_\_



**THE ORIGINAL, PATENTED  
CROSS-FIN COIL**

The refrigeration coil that changed an industry stands today unchallenged for performance, user satisfaction and lasting durability. Made from the finest materials by skilled craftsmen under exacting standards, every Larkin Coil features imbedded fin-to-tube contact, swaged connection, silfos welded construction, and staggered tubing. Write for complete details.

Manufacturers of the original Cross-Fin Coil • Humi-Temp Units • Frost-O-Trol Hot Gas Defroster • Evaporative Condensers • Cooling Towers • Air Conditioning Units and Coils • Direct Expansion Water Coolers • Heat Exchangers • Disseminator Pans.

WATCHDOG OF THE NATION'S FOOD SUPPLY  
**LARKIN COILS**  
519 MEMORIAL DR., S.E. • ATLANTA, GA.



## INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)  
And we'll bet YOU can add to this list.

### Newspaper Humor (Unconscious or Otherwise)

Publisher of *Law and Order*, a magazine for policemen, bears the surname of Copp.

"She got worried over the weekend and left on a honeymoon."—*Houston Press*.

"Wedding bills will ring for Orville and Mary Smith."—*Golden-dale Sentinel*.

"If Mrs. Koko will contact me I will send her a recipe for hand location."—*Indianapolis Star*.

### We Can Trust Him

Dwight Eisenhower is the first Chief Executive in our nation's history to hold a pilot's license (certificate number 93258).

Therefore, when he cuts an Air Force Budget down to payable size, we can be sure he's "on the beam."

Our President has been a pilot for 14 years. He learned to fly when he was stationed in the Philippines as a lieutenant colonel on the staff of

General Douglas MacArthur. As a matter of record, he flew an army lightplane while inspecting units in 1941. A veteran pilot who was with him at the time wrote:

"After we took off from a narrow machine gun range, I turned the controls over to him and he flew for the rest of the day, flying 12 miles to inspect a bivouac area from the air, then 22 miles in another direction to check on something else.

"It was difficult navigation, but he was remarkably accurate. I was quite impressed because he hadn't flown for several years, had never been in a lightplane, and the field on which he made his final landing was anything but desirable."

### News You May Have Missed

Art Thomas was fined \$10 for speeding in Lennox, S. D. He was charged with traveling 40 miles an hour in a 1908 Model T Ford.

107-years-old John Saling left the 1953 convention of Confederate Veterans early.

"Have to go home to tend my corn crop," he explained, "Expect to get four gallons per acre this year."

Friends of friends of the writer toured Scotland quite awhile ago. Therein they met Lord MacIntosh at a grouse shoot. Immediately they all became buddies. Lord MacIntosh proclaimed he would adore to guest the jolly Americans any time they could return to the Bonnie Braes.

Two years later our Americans wrote him they would arrive in Glasgow May 10. Lord MacIntosh was waiting for them. He limousined them to his magnificent estate, and treated them as honored guests.

Next morning the two men went fishing on the Scotsman's private lake. Our friend tangled up his lent fishing tackle.

Host Sir Mac reacted alarmingly. He became irritated, to tell the truth, at this damaging of His property. Again our friend snarled up his line in a tree. Whereupon he caught double-decelled aich from the belly-aching British nobleman.

Our Friend tried to pay for the fouled-up equipment.

Lord Mac wouldn't listen to so desecrating a proposal.

Came time for the Americans to leave. Lord Mac sent them to the airport in a chauffeured Rolls-Royce. At their destination his chauffeur handed our hero an envelope. In said envelope was a bill for two days room and board; transportation to and from the airport; and 28 shillings ha' penny for each of their meals!

Perhaps that's how Lords can afford castles—on the Marshall Plan.

### Out of our Mailbag

The Louisville Engineer and Scientist  
Louisville, Kentucky

Editor:

In re your "Dope" column item, "Name of the Month," I submit the following entry quoted from the Louisville Telephone Directory:

"Physicians & Surgeons (MD)—Rectal Diseases—Asman, Henry B., Brown Building."

NORMAN C. UPDEGRAFF

### Post Scripts

If we occasionally had to walk in the other fellow's shoes, perhaps we wouldn't criticize his gait.—*Instrumentalist*.

Education fails when it does not show the present generation how to distinguish a bright new idea from an old mistake.—*G. C. C. Sidelights*.

In moments of discouragement, defeat, or even despair, there are always certain things to cling to. Little things, usually: remembered laughter, the face of a sleeping child, a tree in the wind, in fact any reminder of something deeply felt or dearly loved. No man is so poor as not to have many of these small candles. And when they are lighted, darkness goes away.—*Roebing Record*.

Some folks pay a compliment as though it cost money.—*Pipe Dreams*.

"There's nothing like a dish towel for wiping that contented look off a husband's face," declares a Florida columnist.

He should meet an electric dishwasher salesman.

Courtship is the moonlight of love. Marriage is the electric light bill.—*GALEN DRAKE*.

A woman is young until she takes more interest in the fit of her shoes than in the fit of her sweater.—*RAYMOND DUNCAN*.

Judging by present construction prices, every house is the "house that jack built."—*KAY INGRAM*.

### Hint to Advertisers

Recent AAA tests reveal that 25% of America's advertising readers forget in one day what you advertised yesterday; 50% forget in two days, and many of the remainder can't recognize your advertising message after a week has gone by.

Therefore: it is wise to repeat good advertisements. You'll get twice the attention with half the cost if you do.

### New Markets

During every minute of 1952 the United States increased its population by five babies. This obstetric action added up to more than 300 an hour, 7,300 a day, 51,000 a week, 223,000 a month, and approximately 2,725,000 a year.

Before any day is over, enough people will have been added to our nation to populate a fair-sized community. By the end of a week our citizenry will have accumulated enough kids to equal the population of such cities as Bay City, Jackson, and Kalamazoo (Michigan). Within a month these new Americans, if gathered in one place, would form a community as large as Akron or Dayton (Ohio) or Syracuse in New York.

By the end of 1952 the addition was greater in number than the population of any city in the country except New York or Chicago. It was 50% bigger than Detroit; twice as big as Cleveland; and four times the size of Cincinnati.

There are tremendous potentialities in this rapid growth of our population. But few have stated the problem it presents to all segments of our nation. To furnish, provide, and serve these new Americans will task business to the utmost soon.

Almost nothing in our business life carries with it such enormous promise for the future, or such responsibilities for the present, as does this "factor" in national sales planning.

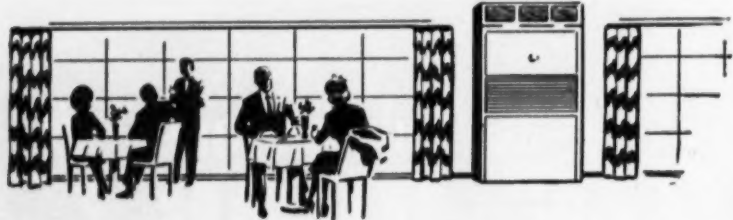
**Weber  
Quality  
PAYS OFF!**

WEBER California-designed refrigeration equipment is designed to sell merchandise . . . meet the demands of market operators everywhere!

WEBER progress means better service . . . better service means distributor-dealer success. Write for distributor-dealer franchise information.



**WEBER**  
showcase & fixture co., inc.  
5700 avalon blvd., los angeles, calif.  
ONE OF THE WORLD'S FOREMOST DESIGNERS AND MANUFACTURERS OF COMMERCIAL REFRIGERATION AND COMPLETE MARKET FIXTURES.



## MADE TO BE QUIET!

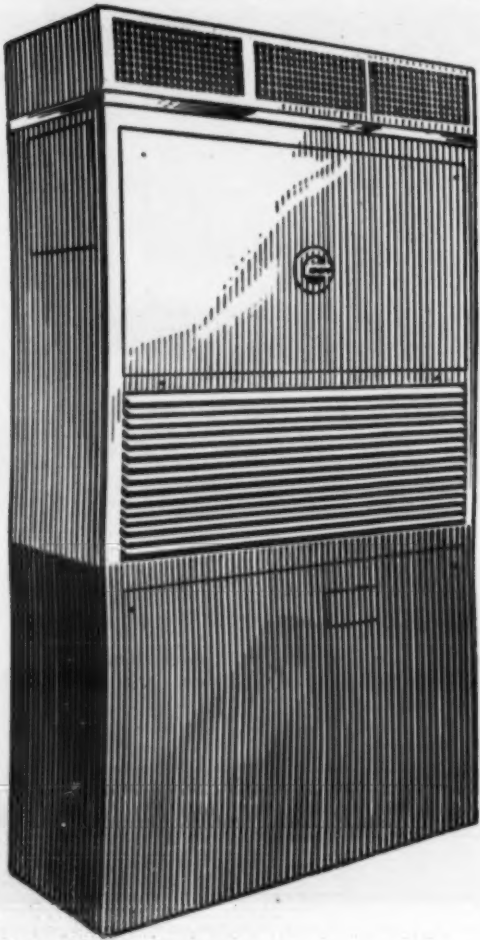
Chrysler Airtemp "Packaged" Air Conditioning is designed and engineered to give QUIET operation. This allows the unit to be installed nearer to room occupants without disturbing them. It may mean less ductwork . . . greater installation economy.

But that's not all! Quietness and freedom from vibration contribute to long life and years of trouble-free service.

Here are just three of the many reasons for the amazingly quiet performance of Chrysler Airtemp Packaged Air Conditioning:

- Vibration is reduced to a minimum in the compact radial compressor, because the compressor design permits perfect balance regardless of the number of cylinders.
- Transfer of any noise or vibration within the air conditioner is prevented by flexible connections in both the suction and discharge lines.
- For super-quiet performance the compressor is supported from rubber mountings. There is no metal to metal contact.

Get all the facts today. See why it will pay you to sell the "Packaged" Air Conditioning most people buy—Chrysler Airtemp!



"Packaged" Air Conditioners  
Six water-cooled models  
2 to 15 H.P. and 2 and  
3 H.P. air-cooled models  
meet most cooling needs.

**Chrysler  
Airtemp**

**HEATING • AIR CONDITIONING  
for HOMES, BUSINESS, INDUSTRY**

Airtemp Division, Chrysler Corporation, Dayton 1, Ohio

Airtemp Division, Chrysler Corporation  
P.O. Box 1037, Dayton 1, Ohio

AC&RN-7-53

Please send full details on the Chrysler Airtemp Comfort Zone  
"Packaged" Air Conditioning proposition.

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

City \_\_\_\_\_

Zone \_\_\_\_\_ State \_\_\_\_\_







## 'Just Plug In' Room Cooler Advertisements Misleading, Says Better Business Bureau

NEW YORK CITY—"Extremely hot and humid weather is no excuse for misleading New Yorkers into believing that room air conditioners can just be stuck in a window and plugged into an existing wall socket," Hugh R. Jackson, president of the Better Business Bureau of New York City, declared recently.

"While it is true that home or office window-installed types of air conditioning units, as against more complicated air conditioning installations for large premises, are essentially 'plug-in' devices, it is misleading for any dealer to advertise or claim that the customer can 'just plug it in' or in any other way imply that no electrical alterations or circuit changes are necessary."

Jackson revealed that a special bulletin has just been sent to the trade and to advertising media by the BBB, quoting from a statement received from Dominick F. Paduano, New York City Commissioner of Water Supply, Gas and Electricity, and pointing out that special wiring or a separate electrical circuit or both will be necessary in most homes or apartments for the safe and legal operation of a window air conditioner.

Commissioner Paduano's statement stressed the following:

1. Each window-installed type of unit of 1/2 or 1-ton capacity should be provided with a separate circuit of at least 15 amperes, in which the usual #14 wire may be sufficient.

2. Each 3/4 or 1-ton unit must use a 20-ampere fuse on a separate circuit or branch circuit, with #12 wire.

3. A 3-prong receptacle, for a 3-prong plug, must be provided, for proper grounding.

4. Tamper-resistant types of fuses should be used.

5. All electrical installations and alterations must be made by a licensed electrician, as provided by the Electrical Code. Any violation of this is a misdemeanor.

The bulletin calls for a halt in recent advertising of the "just plug it in" variety and also urges that if dealers offer to provide installation, they make it clear in advertising and sales representations whether they are referring only to physical installation in the window or whether they are also referring to any necessary wiring alterations.

To homeowners and tenants, Jackson stated: "In installing a window air conditioner you must have a three-prong socket. You may require different wiring for your circuit or a separate circuit. You should use a tamper-resistant or time-lag fuse."

"All electrical alterations must be made by a licensed electrician to comply with the City Code. The electrician is required to report the alterations to the City, and obtain a certificate of approval for the owner of the premises. If you are a tenant, make sure permission is obtained from your landlord before any installations or alterations are made."

"If fuses blow, don't blame the electric company; blame yourself. The electric company is not responsible when you expect a fuse or wiring to do what it never was intended."

"Since the object is to keep cool," Jackson concluded, "don't get in hot water with your landlord, with the city authorities, with your electric company, or with your own wife or husband. . . ."

## Health Angle Featured In Room Cooler Ad

LOS ANGELES—"How Healthy Are Your Lungs?"

That was the attention-getting headline of an unusual newspaper advertisement run recently to promote Fedders room air conditioners.

Underneath the headline were pictured two sets of lungs, one of which was discolored. Copy beneath the latter said: "If you live in a city, you can breathe up to a teaspoonful of dirt, dust, soot every day. This discolors, irritates lungs."

Copy pertaining to the other set of lungs said: "See how much cleaner are the lungs of a farmer. You can stop much dirt, dust, and soot from entering your home!"

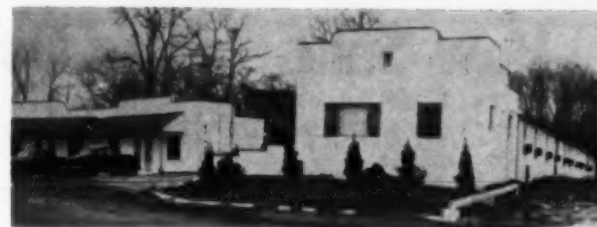
To the right of the pictures was the advice: "Keep harmful dirt, dust, soot, pollen out of your home with a Fedders room air conditioner with exclusive built-in weather bureau!"

In the center of the ad was a drawing of a Fedders unit, the statement "as little as \$2.66 a week," and copy on functions of the air conditioner. Remainder of the ad listed the names, addresses, and telephone numbers of 23 area dealers. Readers were urged to "phone for a home or office demonstration now!"

## McDonald Bros. Moves

MURRAY, Utah—McDonald Brothers Heating & Air Conditioning Co. opened here recently to offer TV and air conditioning equipment and service and sheet metal work.

The company formerly was located in Holladay, Utah.



FOURTEEN ROOM COOLERS under casement windows have proved to Motel Owner John Kramer that tourists will stop for air conditioned accommodations.

## Motel Finds Its Air Conditioned Section Always Filled; Plans 100% Cooling Next Year

EDGEWOOD, Md.—An experiment in air conditioning by a Maryland motel owner who installed room coolers in the wall under casement windows in one wing of his establishment has proved so successful that he is planning to equip the entire motel with air conditioning for the coming season.

The Motel Chase Manor, on U. S. Route 40 in Edgewood, 21 miles north of Baltimore, is a rambling, modern, one-story building, with 33 suites accommodating 102 guests.

Completed in June, 1952, it featured UsAirco 1/2-ton window-type room unit air conditioners in 14 of its suites, reports R. A. Ballentine of the Shepherd Electric Co., Inc., United States Air Conditioning Corp. distributor in Baltimore.

To accommodate window-type coolers with casement window construction, simulated window frames were built into the exterior wall beneath the sill of each casement window. These dummy frames were sized so that the UsAirco 1/2-ton units would fit snugly without the use of spacers.

Capitalizing on the attraction of air

conditioned accommodations, the motel has taken 17 road signs along Route 40 to the north to Elkton and as far as Richmond, Va., to the south on Route 301, each stressing the cooling feature and prominently displaying the UsAirco name.

According to John Kramer, owner of the Chase Manor, demand for the air conditioned accommodations during the past season was so great that his 14 cooled suites were always filled.

"My experience with late comers who were often quite disgruntled because no more air conditioned rooms were available has convinced me that next summer I must be 100% air conditioned," he said. "With cooling in every suite I am looking forward to a banner year."

## Krisch In New Quarters

SAN ANTONIO—August J. Krisch Air Conditioning & Heating Co., formerly located on North Main Ave., has opened for business in its new location at 602 South Medina. K. C. Fink is general manager and air conditioning engineer for the firm.

## Your Sales are the payoff

**AUTOMATIC KUBER**

**AND LA CROSSE GIVES YOU MORE OF EVERYTHING YOUR CUSTOMERS WANT MOST IN COMMERCIAL REFRIGERATION EQUIPMENT**

**SELF CONTAINED BOTTLE COOLER** **DIRECT DRAW** **SELF CONTAINED BLUEBIRD**

**LA CROSSE**

**THE LINE THAT'S PROFIT DESIGNED FOR YOU**

**ICE CUBE MAKER 12 TRAY** **PRE-COOLER**

**LA CROSSE COOLER CO.**

2801 LOSEY BLVD., SO.  
LA CROSSE, WISCONSIN

EXPORT OFFICE:  
80 BROAD ST.  
NEW YORK CITY  
CABLE: EXIMPORT

**ONE source**  
**ONE responsibility**  
for combination heating and cooling controls



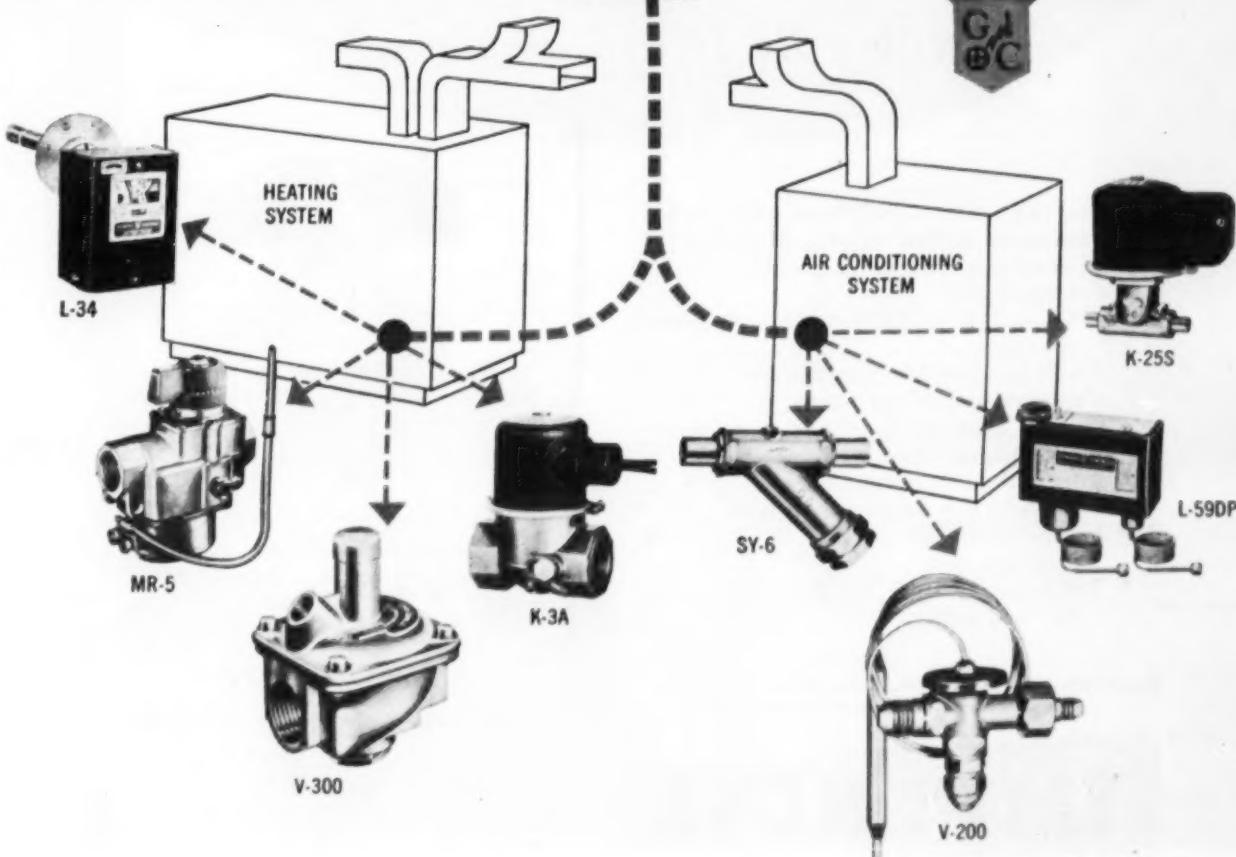
General Controls' 34 conveniently located Branch Offices throughout the United States offer one-source, one-responsibility service for a complete line of automatic heating and air conditioning controls. For heating: room thermostats, fan or limit controls . . . pilot safety controls . . . magnetic gas valves . . . gas regulators . . . and the sensational B-60 self-powered all-gas control system. For air conditioning: thermal expansion valves . . . magnetic stop valves . . . strainers . . . refrigerator temperature or pressure controls. General Controls manufactures a wide variety of controls with thousands of application variations. You can eliminate correspondence, consolidate orders from one source and speed up delivery with fast, convenient single-responsibility service from General Controls.

## GENERAL CONTROLS

Glendale, California • Skokie, Illinois

Manufacturers of Automatic Pressure, Temperature, Level and Flow Controls for Heating, Home Appliances, Refrigeration, Industrial and Aircraft Applications.

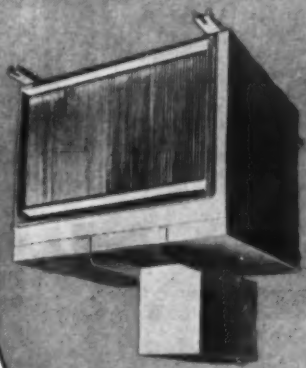
FACTORY BRANCHES IN 34 PRINCIPAL CITIES  
See your classified telephone directory



## EVAPORATIVE CONDENSER

by **KRAMER**

Unmatched in the industry for its trouble-free operation. 2 to 10 ton models.



Write for Catalog R-225

**KRAMER TRENTON CO. • Trenton 5, N.J.**



## How Sales Forces Operate

Seven Equipment Distributors Describe Territory Organizations Which Produce Most Sales, How Salesmen Work, What Reports Are Required

PHILADELPHIA — How different distributors of commercial equipment strive to get the most out of their territory through organization of the sales force was outlined in recent issues of *NCRSA News*, official bulletin of the National Commercial Refrigerator Sales Association.

The heads of seven firms in various parts of the country presented their views as follows:

"Of course there is no sure way to make certain the salesmen cover all possible prospects in their territory since they each cover approximately a third of the state. They work primarily on the 'tip' system, that is, inquiries received at the office from advertising, inquiries received by the factories we represent, and regular customers are usually very helpful and let us know who prospects are," comments M. J. Allen, Paul Allen Refrigeration Co., Little Rock, Ark.

### Wholesale Groccymen Provide Tips

"We also get tips from wholesale grocery men who cover the territories, and if a sale results from their tip, they are reimbursed a fair amount. The amount, however, is up to the salesman who made the sale and is taken from his commission.

"We have found that we miss very few prospects on this system and cold canvassing is unnecessary. We also keep close watch on construction news and grocers' bulletins which tips us on groceries changing hands, building, or remodeling. Since Arkansas' main three fixture companies are located in the same block here in Little Rock, prospects usually visit

all three showrooms—making them hard to miss."

### Honor System Takes Care of Overlap

"Our salesmen do not have protected territories," points out M. David Dubb, Kogod-Dubb Store Fixture Co., Inc., Washington, D. C.

"Our men are permitted to sell anywhere in our franchised area and frequently the same prospects are contacted by more than one of our salesmen. In such instances the two salesmen work together and split their commissions. This does not occur very often as we more or less work on the honor system. In 90% of these instances when a salesman finds out that another salesman is working on the same prospect he steps out of the picture.

"Usually, our drafting department makes a floor plan on each job so it is not difficult for our salesman to establish who or what prospect is being covered by which salesman. When it comes to a show-down or near-dispute, they will split their commissions by working together.

"A few years ago we went to the trouble of dividing our territory into sections but at the last moment we decided to try this at some future time. The main bone of contention is that a territory being covered by a weak salesman could very well make our competitors stronger in that particular territory. I have personally discussed this matter many times with many distributors over a period of years but have failed to get a good solution to this problem."

"We use a Salesman's Daily Report, Planned Work Sheet, and a report on leads either called or mailed

into our office. "These leads are written up and one copy is given to a salesman, the other retained by the office. After the salesman calls on the customer a report is given to the office."—E. W. Farr, Jr., Bell Refrigeration Corp., Cleveland.

"Frankly, we know we are not covering every possible prospect in our territory—but we try," says Paul H. Broering, P. H. Broering Co., Cincinnati. "First, our factory does some direct mail advertising in the territory. In addition, we do some direct mail advertising of our own, covering both McCray and other products we handle.

### Local Bulletin Gives Leads

"We are also members of the Merchants Exchange, a local reporting service from whom we receive a daily bulletin listing new businesses, changes of ownership, new locations for established businesses, and similar information. We have obtained many good orders from prospects originating from this bulletin.

"We also exchange information with a local food machine distributor whose business is not competitive with ours. We also use newspaper advertising, local trade paper advertising and encourage our salesmen to do as much cold canvassing as time permits.

"Last but not least, there is the ever popular 'bird dog'—drivers for the bread companies, meat packers, dairies, etc., who give us a fairly steady flow of leads, some good and quite a few bad, but on the whole a worthwhile source of information at a reasonable cost."

Comments Ray Winther of the Ray Winther Co., San Francisco:

## Commercial Refrigeration

"We have a weekly prospect report sheet on which we ask the salesman to turn in the report on prospects in his particular territory. This does not mean that we want a report on all the calls made nor do we want a report of the 'suspects' in the territory.

"From this weekly report we can very easily tell whether a salesman is applying his time properly because at all times he should have a certain number of prospects that are fairly hot.

### Report Sheet Is Telling Evidence

"If the man doesn't have any prospects it is proof positive that he has not been applying his time correctly and then is the time for us to have a heart-to-heart talk with the man and find out why he does not have prospects.

"We set the territories up in such a manner that no salesman has over 600 possible store operators in his area. We leave it pretty much to the salesman's discretion to make coverage in his territory because it effects his pocketbook just as much as it effects the company's profit picture. The only list that we insist upon in the territory is a perpetual list of our own users.

"This list is made up in loose-leaf form and put into a binder for each particular territory and it is the obligation of every salesman to attempt to cover and call on each of these users at least every three months and record in the loose leaf binder the results of the call or the conversation he had during the call.

### Old Customers Are Future Prospects

"Our feeling is that it is extremely important to keep in contact with our old customers because they are after all, the best prospects for future business.

"We may, perhaps, treat our salesmen too loosely because we do not insist upon voluminous reports but we do feel that with salesmen of relatively high caliber it is to their

interest to use their time correctly in order to earn additional compensation in the form of quality and volume bonuses, without which the basic salary is not too attractive."

Dale Peterson of Peterson Fixture Co., Davenport, Iowa, says:

"We use a Salesman's Contact Report. When this report is turned in each day, the information is posted on a prospect card in our prospect card file. This prospect card file has been made up from telephone books. We have telephone books from every telephone exchange in our territory and have a standing order with each of the exchanges to send us new books whenever they are printed. We also carry advertising in the classified sections of telephone books in telephone exchanges of any size.

"The 3 by 5 cards cover every possible type of prospect for our equipment and if any new categories arise in classified sections, we simply add them to the list.

"By reviewing our prospect file periodically and noting the notations posted therein from the Salesman's Contact Reports, we can pretty well tell whether our prospects are being covered properly."

Frank D. Stella, F. D. Stella Products Co., Detroit, explains:

### Requires Daily Report

"We use a salesman's daily report form and also a supervisor's weekly consolidated report. Aside from these forms, we use the blunt verbal procedure at our weekly meetings asking our men point blank: How many calls have they made? Where? How many prospects? How many have you closed? If not, why?

"These direct questions asked in front of the group tends to keep them alert, as a progress of their activities are posted openly on a bulletin board where the high men can remark to the low men. This type of competition keeps them sales minded since they know that our organization wants direct factual answers to any of the questions asked, as well as the supervisors turning in their consolidated report to management."



It's the  
**Red Head**  
for

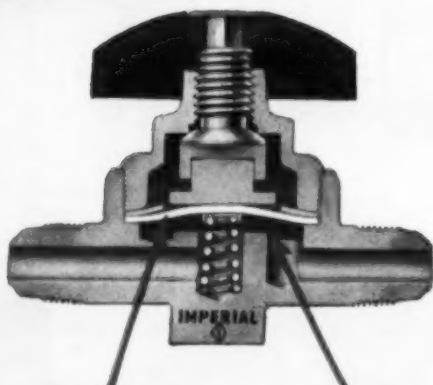
→ Quick, Easy Seating  
→ Positive Shut-Off



IMPERIAL'S NEW  
**RED HEAD VALVE**

...with solid TEFLON diaphragm

- Solid TEFLON Diaphragm gives added assurance against leakage or failure. Chemically stable. Impervious to all refrigerants. Will withstand unlimited openings and closings. Soft seat provides positive shut-off and extreme ease of operation.
- Can be soldered into line without disassembly of valve.
- Inlet and outlet ports in line.
- Extremely low height in all sizes.
- Valve bodies of highest quality brass forgings.
- Triple-Seal feature on flare connections  $\frac{3}{8}$ " and larger.



Solid TEFLON Diaphragm provides positive seal in the RED HEAD. Refrigerant confined in valve chamber.

See Your Jobber

Ask for Bulletin 103 B-REF and Catalog 80

The IMPERIAL BRASS MFG. CO., 534 S. Racine Ave., Chicago 7, Ill.  
In Canada: 334 Louder Ave., Toronto, Ontario

**IMPERIAL**

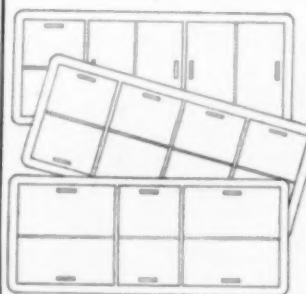
FITTINGS • VALVES • DRIERS  
CHARGING LINES • TOOLS for Cutting, Flaring,  
Bending, Pinch-Off, Swedging

Service  
from any angle



Beverage-Air  
**CAFETERIA  
Bottle Coolers**

Model CA 63-S with optional glass filler type water faucet (enameled finish cabinet).



By simply changing the lids, cabinet will provide service from sides or ends, or can be used under-the-counter.

More flexibility in service! Greater capacity than any other comparable cooler! Same, proven Beverage-Air cooling arrangement!

That's the story of Beverage-Air's latest addition... Cafeteria Bottle Coolers—available in two models with capacities up to 600—6 oz. pop bottles or 570 pints of milk, these coolers are available in either all stainless steel tops, sides and ends or in stainless steel tops, enameled-finish sides and ends. Additional cap-catcher and glass filler type water faucet optional at extra cost.

Efficient suction-type fan cooling arrangement and serving convenience make this a "must" for speeding cafeteria service in schools, restaurants, etc.

Write today for complete information on Beverage-Air Equipment and Direct Mail Literature for mailing to your customers.

**THE PUNXSUTAWNEY COMPANY**  
Punxsutawney, Pa.



## Refrigerated Counter Speeds Service

### Coffee Shop Waitresses Need Not Wait for Preparation of Dishes

PEORIA, Ill.—In a hotel coffee shop where large numbers of people are attracted for a few hours each day, any means of speeding up service gets a warm welcome from the management.

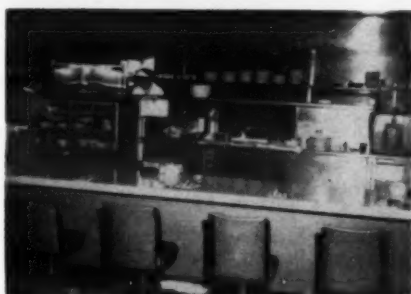
That is why Joseph Lannas, catering manager of the Pere Marquette hotel here is so happy with the salad counter installation made by Kenyon, Inc., local commercial refrigeration and restaurant equipment dealer.

#### SERVICE SPEEDED UP

"The installation has definitely speeded up our service," Lannas declared, "by putting as much food service equipment as possible out where the waitresses can help themselves."

Along two-thirds the length of the salad counter is a pass-through glass case on which salads and desserts are placed. Women behind the counter make up the dishes and place them in the two-shelf case. Waitresses on the outside then select the dishes they need to make up their orders without having to wait for them to be individually prepared.

Next to the salad case is a commercial size toaster, with bread bin



WAITRESS in Pere Marquette hotel coffee shop picks up an item to fill her order without having to wait for it to be prepared.

directly below. Waitresses can get the bread themselves, pop it into the toaster, and have it ready by the time they have assembled the rest of their order.

#### WAITRESSES SERVE JUICE

Beyond the toaster are two counter-type refrigerated juice dispensers. Glasses are stored below the dispensers. Waitresses serve the juice themselves.

With this setup, Lannas observed, the waitresses can perform many of the operations that they previously had to wait for the food preparers to perform. The time saving has been appreciable.

Lannas said that the coffee shop layout was planned by Fred Schmidt Associates of Los Angeles, a firm that had done other work of this type for the Boss Hotel Co. Kenyon got the contract to install the equipment.

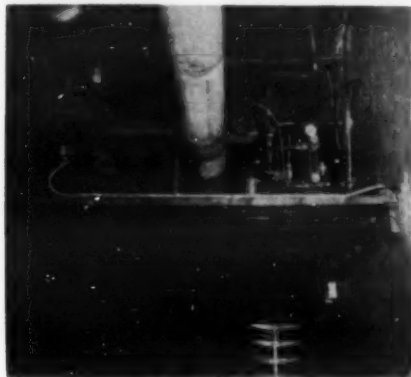
Fred Kenyon, Jr., vice president of the firm, said that he installed Lettner equipment in the salad preparation area along with a Herrick reach-in refrigerator.

#### CONDENSING UNITS REMOTE

All of the refrigerated fixtures operate off remote condensing units installed suspended from the ceiling of a basement hallway directly below the coffee shop. The condensing units are placed on two platforms about 4 ft. below the ceiling and about 10 ft. up from the floor.

One 1/2-hp. compressor serves a salad case and the reach-in refrigerator. A second 1/2-hp. unit serves two cold plates in a butter box and a cold plate in a Lowerator unit. A 3/4-ton unit serves two Tempprite water stations and a butter box.

Kenyon said that, in addition to



CONDENSING UNITS are mounted on platforms suspended from ceiling in basement hallway.

the coffee shop installation, he also installed a 14-ft. long Blakesley conveyor-type dishwasher in the Pere Marquette kitchen. He said that this was one of the largest dishwasher installations in the central Illinois area.

### Joseph Chapman Becomes Sales Manager of Barr Mfg.

OAKLAND, Calif.—Joe B. Chapman, formerly associated with General Electric commercial refrigeration as manager for the northern California wholesale distributor, has joined Barr Mfg. Co., producer of commercial reach-ins and walk-ins, as sales manager and assistant to the manager.

Barr Mfg. Co. has heretofore distributed its products in California, but with increased floor space and plant equipment, is extending its territory.

## RESTAURANT & BAR EQUIPMENT

### Revco Names Distributors In Wash., British Columbia

DEERFIELD, Mich.—J. H. Overmyer, vice president in charge of sales, Revco, Inc., announces the appointment of two new distributors to handle Revco food freezers.

Valco Distributors, Spokane, Wash., will cover the Spokane trading area. L. K. Vallandingham and Mrs. Shirley Hanson are principal owners.

The province of British Columbia, Can., will be covered by United Distributors, Ltd., New Westminster. B. C. Stanley Wright and Jack Phillips are owners of the company.

### Sunroc Moves L.A. Office

LOS ANGELES—Western division offices of the Sunroc Co. have moved to greatly expanded quarters at 2216 W. 11th St. here, Paul H. Walter, western division manager announced recently.

The division has added additional service personnel and expanded its office, warehouse, and service space, Walter said. The new address offers a more centralized location, he added. Telephone number is Dunkirk 1-3938.

### Childs 'Casserole' To Serve Pre-Cooked Meals

NEW YORK CITY—A "quickie" lunchroom where a patron can get a hot meal and be on his way in 10 minutes is planned by the Childs restaurant chain.

Designed to cut labor costs sharply, the "casserole," as the lunchroom will be called, will serve meals pre-cooked at a central commissary and reheated electronically on the premises. By using plastic plates of the throwaway type, the lunchroom is expected to eliminate on-premises cooks and dishwashers.

The daily menu will consist of 15 items, including beverages and desserts.

### Who Is 'Trucking'?

#### Sam, the Refrigeration Man

DENVER—Sam Werb, of Sam's Refrigeration Service here, believes in truck advertising. Drawing up to the rear of Sam's trucks you read "Sam Who?" As you pass you can read on the side "Sam, the Refrigeration Man."

#### JUST ASK US!

Turn to "What's New" Page for useful information on new products.

### Openings for Exclusive DISTRIBUTORSHIPS

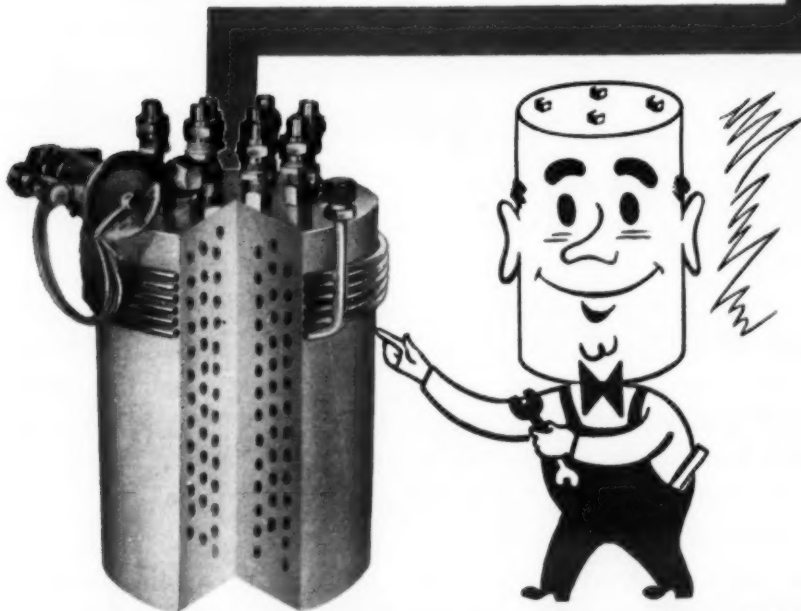
Popular line of counter model refrigerated display cases. Requires direct selling to eating establishments, food stores, drug stores, taverns, bakeries, etc. Also to Dealers already established in most territories. Backed by National advertising program.

Address: Sales Manager

**LERN, Incorporated**  
Chicago 22, Illinois

# heat-x

## ... BEER COOLING AT ITS BEST



Separate copper refrigerant and stainless steel beer coils cast in a solid block of aluminum mean a compact unit of rugged strength . . . protection against freeze-up damage. High conductivity of casting permits maximum chilling at minimum cost. High hold-over capacity permits fast draw . . . easy handling of peak loads. Easily installed. No oil separator or surge tank required.

Write for free descriptive bulletins.

**THE HEAT-X-CHANGER CO., Inc.**  
BREWSTER - NEW YORK

**Sid says:**  
*This White-Rodgers Control Maintains  
the Desired Thickness of an Ice Bank  
... to a fraction of an inch!*

This exceptional control has been developed for use on refrigerated cabinets such as milk coolers and cold drink dispensers where an ice bank is built up as a means of storing refrigeration.

Operating on a new principle . . . maintaining ice bank by thickness, rather than temperature, this control keeps ice bank ready at all times for peak loads.

Available with  
5 Ft. or 7 Ft.  
Capillary Length

**Thickness-Sensitive Bulb —**  
Desired thickness of ice bank is determined by location of sensitive bulb in relation to evaporator coils. Control starts the compressor the instant the bulb is exposed to water, stops it when again sealed in ice.

**No Over-freezing —**  
Prevents over-freezing with resultant blocking of water flow and possible ruptured or distorted cabinet seams and walls.

**High Electrical Rating —**  
13 Amps. at 115v. A rugged and dependable snap-action line voltage control.

**Exceptionally Accurate —**  
This control, operated through the same positive Hydraulic-Action principle that has distinguished other White-Rodgers controls for so many years, controls thickness of ice bank to an accuracy of 1/16 of an inch.

**Side View —**  
The sketch below illustrates placement of the sensitive bulb in relation to evaporator coils and outer edge of ice bank desired. Cabinet here is type having ice bank built-up around inside of the walls.

**Let SID help You!**  
Fill in and mail the coupon below TODAY! It will bring you a continuous series of service bulletins helpful to you in making your installations.

**WHITE-RODGERS**  
*Controls* FOR REFRIGERATION HEATING AND AIR CONDITIONING

**WHITE-RODGERS ELECTRIC CO.**  
Dept. 21F  
1213 Cass Ave., St. Louis 6, Mo., U.S.A.  
Gentlemen: Please send me your information bulletins.

Name \_\_\_\_\_

Home Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

Kind of Work \_\_\_\_\_ Birthday \_\_\_\_\_ (DAY) (MONTH)



## They'll Do It Every Time . . . . By Jimmy Hatlo



## Have You READ 'Peace and Progress' Yet?

**Wagner**  
ELECTRIC MOTORS  
...the choice of leaders  
in industry

## Wagner CAPACITOR-START MOTORS for general purpose applications with high starting torque



Wagner capacitor-start induction motors are a sound choice for applications where starting loads are fairly heavy, but which can be brought up to operating speed quickly. They have become increasingly popular for installation on equipment such as air conditioners, refrigerators, freezers, water pumps, motor-driven tools,

and on similar fractional or integral horsepower applications.

These motors offer low maintenance cost—only a minimum of servicing is required—and they give many years of reliable service with unusual freedom from vibration and noise.

When you standardize on Wagner Motors—you get the advantages of a liberal warranty... of nationwide service facilities, with on-the-spot service, replacement motors and parts available from 25 Wagner-owned Service Branches and more than 750 Authorized Service Stations. You can choose from a wide variety of types and sizes—single-phase or polyphase—(from 1/125 to 400 hp). Bulletin MU-185 gives complete information—write for your copy.

**Wagner**  
Electric Corporation  
EST. 1891

WAGNER ELECTRIC CORPORATION  
6441 Plymouth Ave., St. Louis 14, Mo., U.S.A.

ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES  
AUTOMOTIVE BRAKE SYSTEMS—AIR AND HYDRAULIC

BRANCHES IN 32 PRINCIPAL CITIES

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark  
registered  
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"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

## Competition for College Graduates Indicates Businessmen's Faith In a Prosperous Future

IF CORPORATE demand for college graduates is a barometer of business prospects, America's economy obviously is flourishing.

Business firms are clamoring—and fighting amongst themselves—for the future services of college graduates, according to Dr. T. Luther Purdom, director of the University of Michigan's Bureau of Occupational Information—and many other placement specialists.

"Applications flooded into my office at the rate of more than 100 a day during the weeks preceding our 1953 graduation. More than 50 government agencies are competing with at least 500 private employers—and with one another—for our best men.

"The attitude of recent graduates is revolutionary. They do not hesitate to dictate to employers. They are specific as to the areas or cities in which they will accept a job," Dr. Purdom continued. "Here's an illustrative anecdote: I told a promising lad that he would have to wait a few minutes until the visiting representative of a corporation could interview him.

"I don't wait for anybody," the lad jarred and departed."

A great many employers are grabbing all the promising recruits they can enlist, despite shocking aberrations of this nature. Nor are they worried about the losses to the Army and Navy.

In an astonishingly short time, superior young men will return from Korea or Europe, it is figured, and go back to the jobs held open for them, and on which they got a good start.

Wise employers are playing for big stakes in this recruiting game. Cannily, they are competing for potentially BIG MEN who can help build a company several years hence. Just like bonus-paying baseball moguls, they can't afford to miss a promising rookie who can do them a lot of good in the future. Hence, they are willing to pay well for temporary indoctrination.

Present uneasy commercial indices warn against indiscriminate hiring of youths who aren't brilliant, personable, and ambitious. Draft decimation of the bright young men's labor pool is certain. Thus, we can conclude that employers, who "get dibs on" promising young college graduates, are "stock-piling" genuine talent for 1955 and beyond.

Possibly they are preparing for World War III, and a flood of defense orders. Or, they could be anticipating Peace, consequent Lower Taxes, and a Huge Market for Consumer Goods.

Whatever the reason, corporate hirers do not subscribe to gloomy predictions of failing business and falling prices. They are wooing all the exciting young men and women they can locate.

Economists, viewing this phenomenon from their Ivory Tower, should conclude that a Depression isn't imminent.



## 197 Exhibitors Have Signed Up For 8th All-Industry Show

WASHINGTON, D. C.—As of the middle of July, 197 companies have signed to exhibit at the 8th All-Industry Refrigeration & Air Conditioning Exposition, to be held Nov. 9-12 at the Cleveland Public Auditorium.

At the last All-Industry Show, held in the Fall of 1951 at Navy Pier in Chicago, there was a total of 170 exhibitors.

W. A. Siegfried, president of Su-

perior Valve & Fittings Co. and chairman of the Show Committee, reports that there are exhibit spaces available, but that those who are thinking about exhibiting should make a decision soon, as the show seems assured of being a sellout.

Following is an alphabetic list of exhibitors including booth numbers and amount of exhibition space which has been contracted for at the present time:

### List of Exhibitors

Company	Booths	Sq. ft.	Company	Booths	Sq. ft.
A-P Controls Corp.	706	560	Daffin Mfg. Co.	943	144
Ace Cabinet Corp.	564	329	Davison Chemical Corp.	212	200
Acme Industries, Inc.	512	480	Dayton Rubber Co., The	427-429	200
Admiral Corp.	412	300	Dean Products, Inc.	216	160
Air Conditioning & Refrigeration News	624-626	324	Delco Products Div., General Motors Corp.	724	280
Airserco Mfg. Co., Inc.	717	144	Deming Co., The	819	280
Airtemp Div., Chrysler Corp.	225	264½	Detroit Controls Corp.	300	552
Ajax Corp. of America	618	192	Dole Refrigerating Co.	740	280
Alco Valve Co.	516-517	560	Dun & Bradstreet, Inc.	754	100
Allen Bradley Co.	733-735-737	432	Du Pont de Nemours, E. I. & Co., Inc. Kinetic Chemicals Div.	631	420
Allied Chemical & Dye Corp.	741	240	Ebeco Mfg. Co.	431-433	200
American Air Filter Co., Inc.	919	144	Electric Auto-Lite Co.	230	160
American Brass Co.	726	280	Emerson Electric Mfg. Co.	926	280
American Coils Co. 108-110-112-114	400	400	Eston Chemical Div., American Potash & Chemical Corp.	308	264½
American Gas Machine Co., Div. of Queen Stove Works	424	230	Evans Mfg. Corp.	614-616	216
Aminco Refrigeration Products Co.	116	100	Fedders-Quigan Corp.	640	192
Ansul Chemical Co.	562	400	Federal Refrigerator Mfg. Co.	554	400
Appliance Mfg. Magazine	917	144	Flexonics Corp.	577	135
Arrow Hart & Hegeman Elec. Co.	837	280	Fogel Refrigerator Co.	655-656	200
Bailey & Perkins Co.	333	240	Foster Refrigerator Corp.	646	168
Baker Refrigeration Corp.	913-915	288	Friez Instrument Div., Bendix Aviation Corp.	840	144
Bally Case & Cooler Co.	324-328	540½	Frigid Igloo Mfg. Co.	705	180
Baltimore Aircoil Co., Inc.	129	240	Frigidaire Division; General Motors Corp.	419-421-423	300
Barkow Mfg. Co., August G.	843	200	Gates Rubber Co.	109	230
Belgian Electric Sales Corp.	830	144	Gem Refrigerator Co., Inc.	749	250
Bell & Gossett Co.	408	230	General Controls Co. 822-824-826	432	160
Betz Corp.	607	560	General Electric Co., Air Conditioning Dept.	418	160
Binks Mfg. Co.	583	160	Apparatus Sales Div.	823-825	560
Bohn Aluminum & Brass Corp.	701	360	Glenco Refrigeration Corp.	506-514	704
Bonney Forge & Tool Works	222	200	Halstead & Mitchell	102-104	200
Brewer-Titchener Corp.	829	280	Harris Refrigeration Co., Inc.	909	144
Brunner Mfg. Co.	510-511	640	Hastings Air Control, Inc.	925	144
Bryant Heater Div., Affiliated Gas Equipment, Inc.	831	280	Heat-X-Changer Co., Inc.	503	360
Bundy Tubing Co.	621	280	Henry Valve Co.	637	300
Bush Mfg. Co.	508	480	Henry Vogt Machine Co.	916	280
Carbonic Dispensers, Inc.	836	144	Hill, C. V. & Co.	838	144
Carver Pump Co.	571	135	Holsclaw Bros., Inc.	657	100
Century Electric Co.	912	280	Howard Refrigerator Co.	707	800
Chase Brass & Copper Co., Inc.	309	200	Ideal Cooler Corp.	615	280
Chemical Solvent Co.	332A	120	Imperial Brass Mfg. Co., The	318	333½
Coldin Cabinet Co., Inc.	630-632-634	486	International Register Co.	723	144
Commercial Refrigeration & Air Conditioning	557	256	Jacks-Evans Mfg. Co.	718	280
Consolidated Vacuum Corp.	739	144	Jamison Cold Storage Door Co.	722	280
Copeland Refrigeration Corp.	556-558-560	1,200	Jarrow Products	713	144
Cornelius Co.	731	144	Jewett Refrigerator Co., Inc.	814	144
Cory Corp.	623	280	Jordan Refrigerator Co., Inc.	100	580
Curtis Refrigerating Machine Div., Curtis Mfg. Co.	505-515	736	Kason Hardware Corp.	638	162
			Kelvinator Div., Nash-Kelvinator Corp.	550-552	800

Company	Booths	Sq. ft.	Company	Booths	Sq. ft.
Kenmore Machine Products, Inc.	404	230	Refrigeration Appliances, Inc.	721	144
Kennard Corp.	312	345	Remco Inc.	106	230
Kerotest Mfg. Co.	133	240	Remcor Products Co.		
Kirsch Co.	513	135	Div. Refrigeration Maintenance Corp.		
Koch Refrigerator Co.	911	144	Remington Corp.	812	168
Kold-Hold Mfg. Co.	120-122-124	300	Resistoflex Corp.	526	200
Kramer Trenton Co.	403-413 (incl.)	600	Reynolds Metals Co.	930-934	560
LaCrosse Cooler Co.	428	240	Riverside Mfg. & Electric Supply Co.	842	240
Larkin Coils, Inc.	551-553	800	Robbins & Myers, Inc.	752	280
Lau Blower Co.	729	144	Rochester Products Div., GMC	653	280
Lehigh Mfg. Co., Div. of Lehigh Foundries, Inc.	126-128-130-132	400	Sealed Unit Parts Co., Inc.	808	180
Lewin-Mathes Co.	561	400	Selmix Dispensers, Inc.	727-828	336
Libbey-Owens-Ford Glass Co.	835	280	Servel, Inc.	200	480
Linde Air Products Co.	815	280	Sherer-Gillett Co.	809	140
Lipman Refrigeration Div., Yates-American Machine Co.	500	182	Spencer Thermostat Div., Metals & Controls Corp.	940	350
Liquid Carbonic Corp.	765	100	Sporlan Valve Co.	401	580
Madden Brass Products Co.	719	144	Square D Co.	937	144
Marby Co.	569	135	Standard Refrigeration Co.	304	264½
Marley Co.	744	280	Sub-Zero Freezer Co., Inc.	509	480
Marlow Coil Co.	229	276	Sun Oil Co.	811	280
Marlow Pumps	923	144	Superior Valve & Fittings Co.	125	230
Marsh, Jas. P., Corp.	113	300	Swift Mfg. Co., Inc.	935	144
Maurey Mfg. Corp.	844	200	Taco Heaters, Inc.	933	144
McCall Refrigerator Corp.	921	144	Tecumseh Products Co.	600-604	1,100
McCord Corp.	331	160	Tele King Corp.	570	280
McCray Refrigerator Co., Inc.	734	280	Temprite Products Corp.	209	264½
McIntire Connector Co.	520	240	Tenney Engineering, Inc.	219	333½
McQuay, Inc.	700	574	Texas Co.	205	264½
Meier Electric & Machine Co., Inc.	725	168	Time, Inc.	134	320
Mitchell Mfg. Co.	119	290	True Mfg. Co.	834	144
Mueller Brass Co.	501	360	Tyler Fixture Corp.	601	574
National Lock Co.	730	280	Typhoon Air Conditioning Co., Inc.	639-641	560
Nevinger Mfg. Co., Inc.	818-820	288	Uniflow Mfg. Co.	622	162
Nickerson & Collins Co.	518	216	United Friguarator Engineers	711	168
Pacific Lumber Co.	756	100	United Mfg. & Service Co.	425	100
Palmer Mfg. Corp.	738	280	United Refrigerator Co.	305-400	680
Paragon Electric Co.	559	400	United States Air Conditioning Corp.	504	378
Peelers of America, Inc.	519	240	United Wire & Supply Corp.	118	100
Penguin Products	513	224	Velocity-Power Tool Co.	502	150
Penn Brass & Copper Co. 712-714	560	240	Victor Products Corp.	612	600
Penn Controls, Inc.	204	200	Viking Copper Tube Co. 415-417	240	240
Pinnacle Equipment Corp.	924	280	Virginia Smelting Co.	332	240
Plasti-Kote, Inc.	106	100	Henry Vogt Machine Co.	916	280
Primus Co.	507	224	Voss Co., Inc., J. H. H.	563	160
Pyramid Instrument Corp.	816	144	Wabash Mfg. Co.	555	400
Quiet-Heat Mfg. Corp.	715	144	Wagner Electric Corp.	432	240
R B M Div., Essex Wire Corp.	929	144	Warren Co., Inc.	841	350
R. C. S. Tool Sales Corp.	645	280	Westinghouse Electric Corp.	323-327	400
Ranco Inc.	619	280	White-Rodgers Electric Co.	313-317	360
Ready-Power Co.	319	200	Wilson Refrigeration, Inc.	627	280
Rector Mineral Trading Corp.	648	168	Wolverine Tube Div., Calumet & Hecla, Inc.	218	200
Redmond Co., Inc.	208	200	York Corp.	213	345

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A-540-HR	540	1052	153.22 Sq. Ft.	275.00
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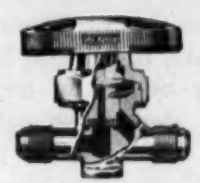
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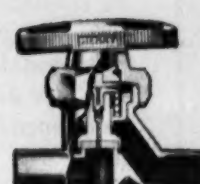
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## HOW TO SELL TO NEW HOME BUILDERS

Airtemp's Buchholzer  
Replies to Texas  
Builder

Mr. Cole declared that residential air conditioning has to be (1) sellable, (2) installed easily without interfering with the structure or other trades, and (3) cheap. Are these assumptions correct?

Mr. Cole is right. And I believe the air conditioning industry has been working toward these goals since the middle '30's, when the first self-contained air conditioners made residential air conditioning practicable.

Would you say now that it is "hard" for builders to include central air conditioners in new housing?

No. Not at all. We have had a large measure of success in installations where there has been full cooperation between builder and air conditioning contractor. Regardless of what equipment is used, it's a case of the left hand knowing what the right hand is doing. And as Mr. Cole pointed out, this doesn't always happen in the home-building industry, where at times the work done by the general trades is not as accurate as the builder or air conditioning contractor desires.

What can the air conditioning people do about that?

Reported in the June 1 issue of the NEWS were the remarks of N. A. Cole, a Texas architect who represented the National Association of Home Builders at Lehigh University's Technical Conference on Year-Round Residential Air Conditioning.

Cole's remarks—designed to tell manufacturers of residential air conditioning equipment what they should do to spur sales among new home builders—aroused considerable interest and discussion in the air conditioning industry.

One of those who has put his comments about Cole's remarks on paper is Carl E. Buchholzer, president of Chrysler Airtemp. The following are his viewpoints on some of the points raised by the Texas builder, presented along the form of an interview, for the purpose of clarity.

Not much—right now. Almost by its nature, year-round air conditioning ducts and equipment fall into the construction category. And it's necessary to work closely with the other trades in order to get everything into the house where and the way it's supposed to fit. The air conditioning-heating contractor must work very closely with the builder. Better yet, the contractor and the builder should get together while the home is still on blueprints. We have eliminated a lot of unnecessary work this way.

What have the air conditioning manufacturers done by themselves to work out some of the problems encountered in air conditioning homes?

Every manufacturer I know of has experimented with his residential units in the field. First we work out the problem with slide rules. Then, when we get the installation in and running, we throw away the slide rules and work the system out practically. We have experimented with almost every standard brand of insulation.

We have actually determined heat loads in homes with and without overhangs. We have measured and re-measured the efficiency of double-glazed windows, not with slide rules but thermometers. And we have tested various sizes of units under similar conditions.

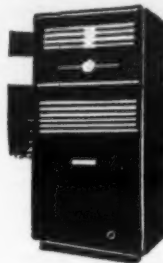
We can tell the builder what size ducts to use, where to place the unit, what kind of insulation to use, and to use double glazing, but we can't build his house for him.

What are the principal problems facing the air conditioning manufacturer?

Briefly, the residential air conditioning manufacturer has had to:

1. Design and build a unit far more compact than any now in use.
2. Make this unit capable of cooling average homes containing up to eight rooms.
3. Sell this compact, capable unit at a price which will appeal to the greatest number of users.

Compared with the problems of air conditioning, the auto builders had it



## AIR CONDITIONING (Year-Round Residential)

easy back in 1902. What they hunted for then was a car of a size and price that would appeal to the greatest number of people. From the product point of view, the air conditioning industry has had to look for the same thing. Unlike early autos which came in one size, we have had to make equipment in various sizes. I think the industry has found the answer not only to builders' problems but to those of the homeowners, too, as far as equipment capacity, size, and prices are concerned.

In the light of recent publicity about air conditioning—many localities have restricted its use when it's needed most because of the water required—the waterless air conditioner provides one of the best selling points that the builder ever had for an air conditioned home. Costs of installing air-cooled equipment can be considerably less. It's not necessary to install water piping so the plumbing bill is eliminated. Also, we can locate the unit in a better place, requiring less time and money to install.

What do you mean by "locating the unit in a better place?"

Here's an illustration: In Kalamazoo, Mich., an air-cooled unit recently was installed in a display home. The cooling coil was mounted in the furnace duct as the system was built. The condensing unit was set out in the garage, which was attached to the house. The air used to cool the refrigerant was taken from the garage and the low attic.

The only "hacking" required was to drill holes in the garage baseboard through to the basement for the refrigerant lines, and install air inlet-outlet grilles on the underside of the overhang. Outside air was circulated through the attic and made it much cooler than the normal attic on a hot day. The whole job required about two days.

One thing builders must expect. Somehow, the home air to be cooled or heated has got to go through the cooling coil. In some instances, it's actually cheaper and better to bring the duct to the air conditioner. But in the majority of cases, the cooling coil will be located in the duct near the furnace. This entails some sheet metal work. However, it's still a lot cheaper to fabricate this one section in the sheet metal shop and bring it out to the job for quick installation.

Is air-cooled equipment any cheaper?  
Our experience has been that it

costs just about as much to build an air-cooled unit as a water-cooled job. But the builder can benefit in reduced installation time and costs.

Will air conditioning units become cheaper?

Yes. But don't ask me when. Our records reflect only a 56% cost increase for residential units since 1938. Compare that with the present price of a car and its 1938 cost. You'll probably find most cars have doubled and quite a few have tripled in price.

Right now, the air conditioning business is in about the same predicament the auto business was in during the early 1900's. In May, we knew of 317 furnace and air conditioning equipment manufacturers. Before the auto business got into long pants, there were literally hundreds of firms making them.

Stiff competition and the desire on all fronts for air conditioning will bring about better, lower-cost units.

Is heavy insulation in walls and ceilings necessary?

That's a question which must be answered by beginning with "it depends." Insulation is necessary. The more the better. But if the house has an overhang, two inches in the walls should be sufficient. I feel that the ceiling should have at least four inches of insulation to take care of heating and cooling requirements.

Do you feel double-glazed windows are necessary?

Yes. Every house built should have them for insulation. The builder still can have them and his "picture window" too. Mr. Cole forgot to mention that double-glazed windows eliminate the cost of storm windows. A good set of storms and screens run anywhere from \$300 to \$500, installed. Any builder or real estate salesman should be able to make a red-hot selling point there.

What suggestions do you have for builders who want to air condition their market homes?

Call in his air conditioning dealer while the home still is on paper.

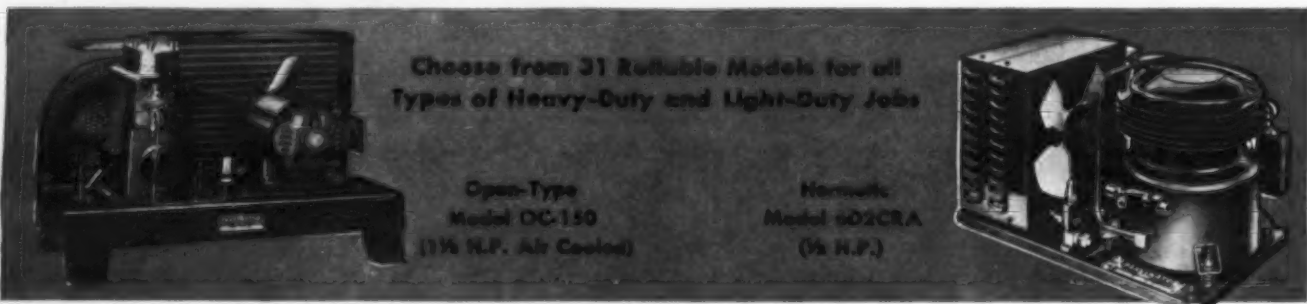
That's a point that can't be overstressed, and something that's happened too infrequently in the past. There must be close coordination between builder and air conditioning contractor. Get this from the very beginning and there will be savings in time and money.

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## Carrier Plans \$2 Million Worth of Cooling for Three of Cincinnati's Major Office Buildings

CINCINNATI—Three major Cincinnati office buildings, one under construction and two others each more than 25 years old, will be completely air conditioned by Carrier Corp. at a total cost of about \$2 million, it was announced recently.

The two existing buildings are the Federal Reserve Bank (Cincinnati Branch) and the Union Central Life Insurance Co. Annex. The new building will be occupied by Cincinnati Gas and Electric Co.

According to Lowell G. Powers, Carrier's Cincinnati branch manager, the Union Central installation will have 1,000 tons of refrigeration, the amount needed to air condition the 260,000 sq. ft. of floor space in the eight-story building. Work is scheduled to be completed about September 1954.

The modernization program will be accomplished during working hours without disturbing normal operations and will include 842 separate Carrier Conduit Weathermaster units installed under each window and replacing existing radiators.

The units will provide completely filtered, humidity-controlled air at all times, with individual, manual adjustment so that occupants may choose temperatures best suited to their personal needs.

The system will compensate for changes in outdoor temperatures, the movement of the sun around the building, and the varying heat loads inside caused by people and lights.

The conditioned air—heated or cooled—is sent to the individual units at high velocities through small-diameter, space-saving conduits concealed within covered columns. The Conduit system features complete absence of mechanical equipment on the floors, thereby conserving valuable space for office use.

Certain interior portions of the building will be air conditioned by an overhead duct system (hidden by acoustical tile and fluorescent lighting equipment) and more than 100 high-pressure ceiling diffusers, or outlets.

Chilled water for the air conditioning equipment will be supplied by two Carrier absorption machines located in a penthouse. These refrigerating machines utilize the absorption principle by which, paradoxically, water is chilled with steam.

The refrigerant is ordinary water and the absorbent is a simple salt solution. Vibration problems are minimized because the machine's only moving part is a small solution pump.

The building, located at Fourth and Vine Sts., is presently occupied by

about 1,400 people. The air conditioning system was designed and engineered by Carrier.

A Carrier Conduit Weathermaster system (with 677 separate "under the window" units) also will be installed in the eight-story Cincinnati Gas and Electric Co. building, a new office and garage annex at 315-35 Main St., adjoining the utility's headquarters at Fourth and Main Sts.

Refrigeration will be supplied by two completely automatic centrifugal machines having a total cooling capacity of 800 tons and located in the garage area in the basement.

The centrifugal machines will supply chilled water to the Conduit Weathermaster system, which will air condition the building's 250,000 sq. ft. of floor space, with the help of a special interior zone arrangement.

The interior zone will include a cafeteria, to be air conditioned by a 60-ton reciprocating compressor, and a private dining room, to be air conditioned by a five-ton reciprocating compressor—both of which are connected to a special built-up air handling system. The reciprocating compressors are similar to those used in household refrigerators.

Architects were Hake & Hake; consulting engineer is James E. Allen; mechanical contractor is Peck, Hannaford & Briggs, and Frank Messer & Sons, Inc. is the general contractor. All are Cincinnati firms. Work is scheduled to be completed late this year.

The building will be occupied by about 1,000 people.

The Federal Reserve Bank, a 14-story structure, will also be air conditioned by a Carrier Conduit Weathermaster system employing 572 separate "under the window" units. A 523-ton centrifugal machine will supply chilled water for cooling and dehumidifying the air within the building's 138,000 sq. ft. of floor space.

It will be located on the roof instead of in the basement area, which will be completely air conditioned. The bank's vault is in the basement.

Interior areas on the first three floors, as well as the basement area, will be air conditioned by four Carrier Weathermakers—one for each floor and the basement. They will supplement the Conduit Weathermaster system on those four levels.

Like the Union Central Building, the installation work is being done by Carrier. It is scheduled to be completed late this year and will be occupied by about 1,200 people.

## Diffuser for Commercial, Home Installation Made By Ashburn Supply Co.

LOS ANGELES—A diffuser for evaporative coolers, designed for ceiling installation in residences and commercial buildings, is being manufactured by Ashburn Supply Co. located here.

The cooler diffuser is produced in three models to fit all duct sizes for roof mounted evaporative coolers in all makes to 6,500 c.f.m. It is constructed of 26 gauge cold rolled steel and is provided with a cone interior bottom.

The unit is finished in ivory baked enamel, and its aluminum painted louvers are reversible if "non-vision" appearance is desired. One screw at each corner is all that is required for installation, according to the manufacturer.

Another feature is the sliding damper panel, which may be inserted during the winter time to block off drafts.

The Ashburn diffuser is delivered to the customer ready for installation, packaged individually in fibre-board cartons.

Model 16 (5 in. deep by 15½ in. square) can be used with 10-in., 12-in., and 14-in. round pipe and small size coolers, and is priced at \$8.50, f.o.b. Culver City. Model 18 (7 in. deep by 20 in. square) fits duct sizes to 18 by 18 and is priced at \$10.50.

Model 22 (7 in. deep by 24 in. square) fits duct sizes to 22 by 22 and is priced at \$12.50, the manufacturer indicated.

## Dr. Homer Addams Dies, Was ASHVE Past Pres.

PHILADELPHIA—Dr. Homer Addams, a charter member and a past president of the American Society of Heating & Ventilating Engineers died in Germantown hospital here on July 3. He was 80 years of age.

Dr. Addams was active in founding the Society's research laboratory at the United States Bureau of Mines at Pittsburgh in 1919 and was a member of the first "Guide" committee in 1922.

At the time of his death, Dr. Addams was chairman of the board of directors of the Fitzgibbons Boiler Co., Inc. in New York City.

## Robert Main Appointed Sales Manager for Viking Blower Division

CLEVELAND — Appointment of Robert V. Main as sales manager of the Blower Div., of Viking Air Conditioning Corp. here, was announced by Frank Gibbons, general sales manager of the company.

Main will aid in planning Viking's expanding blower production and sales, Gibbons said.

Main previously did public relations and market development work for Marvin Helf, Inc., Cleveland builder and general contractor. He has also been with the Cleveland Electric Illuminating Co. as manager of the home bureau and housing coordinator of residential and community development in the CEI area.



## For Winter Comfort

MIDDLE OF THE SUMMER is not too soon to begin thinking of winter heating equipment. Lau Blower has introduced three new direct-driven blowers for furnaces with 50,000 B.t.u. to 125,000 B.t.u. input. Features include quiet operation, 5-speed control, minimum space requirements.

## Cool Dorm for Truckers

BUFFALO — An air conditioned dormitory is a unique feature of the newly opened Rodgers Motor Lines, Inc. truck terminal here.

**Let WOLVERINE**  
**lend you**  
*a helping hand*

**in supplying fabricated tubular parts**

You'll find it a distinct advantage in most cases to have Wolverine supply the tubular parts required for your completed product.

Our concentrated knowledge of tube manufacture, coupled with over 36 years of experience in this field, qualifies us as specialists who can deliver to you the tubular part which will best meet your exact requirements.

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**MARLEY**  
Natural Draft

**COOLING TOWERS**

Accepted by the air conditioning, refrigeration and processing industries as the best buy for lasting economy. Entire construction is of heart redwood. Balanced spray system uses patented Marley non-clog spray nozzles. A wide range of commercial and residential sizes stocked in 30 cities for immediate delivery.

Call Your Local Marley Representative



**The Marley Company**  
Kansas City, Missouri

**in providing Spun End driers or accumulators**

for your freezers or refrigerators, walk-in coolers, room coolers.

**in showing you the heat transfer efficiencies of Wolverine Trufin\*—the integral finned tube**  
for use in condensing and evaporating units.

Wolverine Trufin and the Wolverine Spun End Process available in Canada through the Unifin Tube Co., London, Ontario.

\*REG. U.S. PAT. OFF.

{A PATENTED PROCESS RE. 22465}

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## Other Wolverine Products

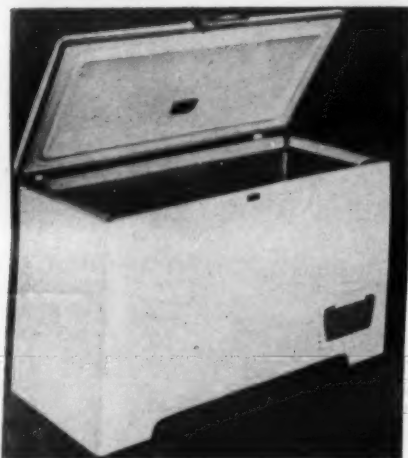
CAPILATOR\*  
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WOLVERINE TRUFIN\*  
—the integral finned tube  
REFRIGERATION AND AIR  
CONDITIONING TUBE  
(Plain or Tin Plated)  
S.P.S. PIPE  
SPUN-END TUBE†

\*Reg. U.S. Pat. Off.  
†A Patented Process RE 22465



## What's New

When requesting further information on new products, please use "Information Center" form.



### Revco Shows 15-Cu. Ft. 'Economy Freezer'

KEY NO. C-730

DEERFIELD, Mich.—A new 15-cu. ft. chest-type home freezer has been introduced by Revco, Inc.

Called the "Economy" model, the freezer features a faster freezing aluminum interior food storage compartment, moisture-free dry wall cabinet construction, and automatic signal light system.

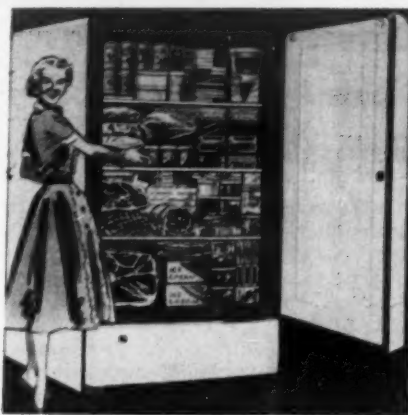
In keeping with the economy theme, the freezer eliminates baskets and deluxe hardware.

### Water Cooler Has Room for Bottles



KEY NO. C-731

PRETTY BETSY WATSON and the "Lectric Ice" water cooler make a cool and refreshing combination on a warm summer day. The EC-550 shown is a brown enamel, compartmented model in which bottled items may be stored and cooled. "Lectric Ice" water coolers are products of Uniflow Mfg. Co., Erie, Pa.



### Sq. Yd. Will Hold Victor 19-Cu. Ft. Upright Freezer

KEY NO. C-732

HAGERSTOWN, Md.—A new 19-cu. ft. upright "Quickfreezer" that is said to occupy less than one square yard of floor space was announced recently by the Victor Products Co. here.

Other features of the new unit are eye-level accessibility and automatic temperature control.

An optional feature is four individual inner compartment doors that operate on exterior mounted hinges. The lower three doors can be used as shelves when loading or unloading the freezer, the company said.

The four compartments are refrigerated by the Victor concealed freezing coils with all sides, top, and bottom refrigerated.

An electric heater controlled by manual switch can be used in periods and locations of high humidity to minimize moisture condensation.

### Big Joe Introduces Manually Operated Hydraulic Lift

KEY NO. C-733

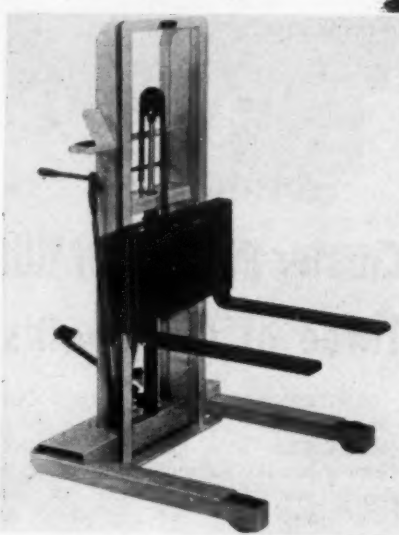
CHICAGO—New model of a manually operated hydraulic lift which is saving contractors many man-hours in the installation of coils has been introduced by Big Joe Mfg. Co. here. Battery-operated models are also available.

The new model 51B manual lift and the 56A battery model are available with forks, but other models have a platform which can be raised to a height of several feet.

Pumping a foot lever operates the hydraulic lift mechanism, which can handle loads up to 1,000 lbs.

Refrigeration contractors are finding the lift useful for coil installation in two ways—as a drill support and for hoisting the coil in position. A drill can be mounted on the platform which is then raised to the proper height and holes drilled for coil hangers, the lift being strong enough to support the weight of a man in addition to heavy equipment.

Several functional improvements have been incorporated in the new models, according to the manufac-



turer. A straddle type base can be furnished in a range of widths up to 50 in.; forks, adjustable in any position to support the load best, are available in lengths from 25 to 36 in.

### Device on Ace Cabinets Retards Condensation



KEY NO. C-734

NEW BEDFORD, Mass.—A low wattage heating element is installed beneath the lower door track of Ace frozen food display cabinets to retard condensation, according to Ace Cabinet Corp. here.

"This assures clear visibility of the interior through the double thermopane doors," it is claimed.

"Outside shell of the cabinet is made of welded steel, rust-proofed and finished with high gloss double baked white enamel. Low thermal conductivity corkboard and rigid glass fiber insulation helps maintain constant temperature with low operation cost."

Condensing unit is hermetically sealed, mounted in a "glide-out" mechanism.

Model SG-12 holds 495 standard frozen food packages. Dimensions

without superstructure are 53 3/8 in. by 30 1/4 in. by 36 in.

Model SG-15 holds 655 standard frozen food packages. Dimensions without superstructure are 65 1/4 in. by 30 1/4 in. by 36 in.



FILTRINE "Taste-Master" PURIFIER

Stop service calls . . . keep out rust and sludge . . . open new doors to sales acceptance!—with coolers, ice-makers, sell "Taste-Master"!—checks chlorine, traps sediment; promotes service-free satisfaction with all water processing appliances. Write—

Filtrine MANUFACTURING CO. BROOKLYN 38 • N. Y. "Water Coolers and Filters for 40 Years"



#### MEET MICHAEL CRAKES

Proprietor of Michael's, one of Minneapolis' newest and most popular suburban restaurants.



"...as good an investment as I've ever made!"

## Crystal Tips ICE MAKER



Several months after Maurice Grow of Grow Refrigeration Co. had installed two Crystal Tips Ice Makers in the new Michael's Restaurant, he received a call from the proprietor.

"I just wanted you to know how pleased I am with my two Crystal Tips Ice Makers," Mr. Crakes informed him. "They've been a real help in getting this business off to a good start. I consider them as good an investment as I've ever made."

Every quantity user of ice cubes is a prospect for Crystal Tips Ice Maker. It pays for itself in a short time . . . costs only a few cents a day for water and electricity . . . provides a constant, full supply of better ice, always fresh, crystal clear, sanitary and longer lasting. Investigate the profit possibilities. Available in two styles; with standard 110 lb. storage bin, or with auxiliary storage bin of 360 lb. capacity as illustrated.



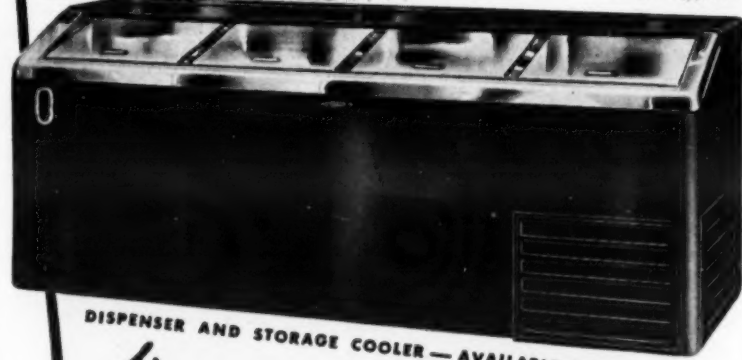
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1787 FOURTH STREET N. W.

ICE MACHINE CO.

FARIBAULT, MINNESOTA

## Built TO LAST A LIFETIME



DISPENSER AND STORAGE COOLER—AVAILABLE IN 7 MODELS

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CHOICE OF PORCELAIN OR STAINLESS STEEL EXTERIORS

For fast, economical, uniform cooling you can't beat the new P-H Dry Beverage Cooler. In over 20 years of field testing the patented P-H forced updraft cooling system has been proved superior to any other type. Actually built to last a "lifetime" the exteriors of these attractive streamlined coolers are finished in black porcelain with stainless steel working surfaces . . . also available with stainless steel exteriors. Your choice of 50", 6', 8' or 10' models with bar tops if desired . . . both remote and self contained.

SEE YOUR NEAREST P-H DEALER . . . OR Write -

PUFFER-HUBBARD MFG. CO. GRAND HAVEN, MICHIGAN

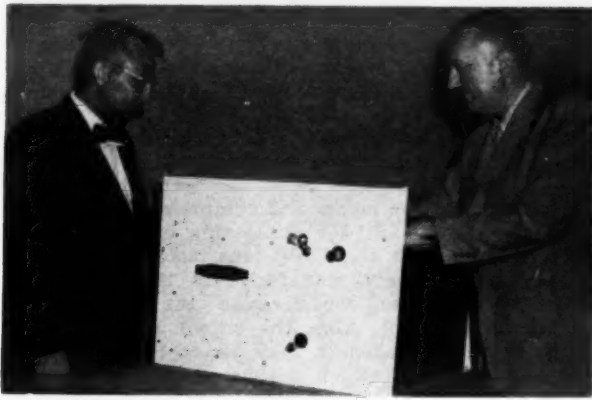
New York Export Office—Puffer-Hubbard International 440 Lafayette St., New York City—Cable Address "MANREFSUP"

REACH-IN, PASS-THRU and FLORIST CABINETS — DOUGH RETARDERS — DAIRY-DELICATESSEN AND DISPLAY CASES — WALK-IN COOLERS



## What's New (Cont.)

### York-Shipley Introduces Residential Conditioner



KEY NO. C-735

YORK, Pa.—A residential summer air conditioning system that comes in two parts has been developed by York-Shipley, Inc. here, veteran manufacturer of automatic home heating equipment.

Packaged in two metal boxes, the Shipley residential cooling system consists of the "Homeaire Generator" which includes the condensing unit, and which is designed for installation in a carport or protected outdoor location; and a "Shipley Conditioner" unit which can be installed in any

C. H. NEIMAN, vice president in charge of engineering, Shipley, Inc., (left), and H. L. Mohr, design engineer, study the operation of the new Shipley Homeaire conditioner package, part of the new 2-package system. This unit includes a twin-fan unit cooling coil and filter for providing all of the functions of summer air conditioning.

waste space within the home such as closets, hall ceilings, crawl spaces, or attics for connection of grilles or ducts.

Promotion for the Shipley conditioner will emphasize that it requires no water connections for refrigerant condensing purposes, and that it is installed independently of the heating system, and hence is easily adaptable to old homes.

The Shipley conditioner is being used in homes in the Levittown, Pa. development of Levitt & Sons which are built to include air conditioning. Capacity of the unit for the Levitt homes is said to be 15,700 B.t.u. per hour.

The Homeaire Generator unit measures 32 in. wide, 13 1/2 in. high, and 27 in. deep, while the Conditioner unit is 28 in. wide, 21 in. high, and 23 1/2 in. deep.

### Portable Beer Dispenser Does Entire Cooling Job

KEY NO. C-736

PHILADELPHIA—A portable electric draught beer dispenser that is designed to do the entire beer cooling job strictly on its own, has been introduced by the Merchant & Evans Co. here.

Measuring 18 in. wide, 30 in. deep, and 42 in. high, the dispenser is mounted on large casters and is equipped with handles. Thus it can

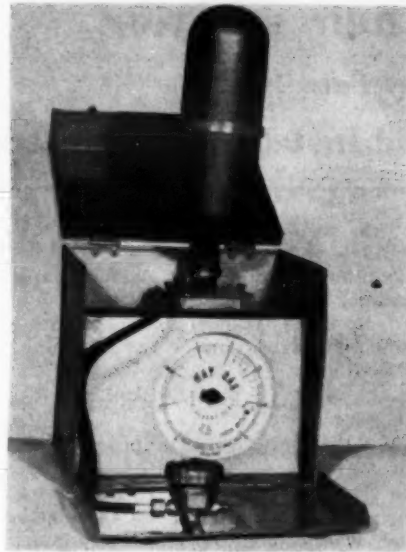


be wheeled through any door and transported by car or truck, the company said. With five minutes set up time at any electrical outlet, 40° F. beer from a 70° F. inlet temperature can be drawn at the rate of 765 glasses per hour.

No pre-cooling of the barrel is necessary, the manufacturer declares. This is possible by using the Temp-rite beer cooler as an integral part of the dispenser. Stainless steel beer coils are submerged in the liquid refrigerant itself and the heat of the beer is transferred directly into the main body of the refrigerant, the firm indicated.

A Cornelius air pump provides correct air pressure, while a 1/2-hp. Tecumseh hermetic condensing unit provides the refrigeration. Other equipment includes a fused switch box with 10 ft. of electrical lead, a Peerless barrel tap, a Cornelius regulated flow faucet, and an aluminum frame table with stainless steel top, on rubber casters, and equipped with drip pan and drain.

### Refrigerant Charging Kit For Capillary Tube Systems



KEY NO. C-737

ALLIANCE, Ohio—To provide a precise method of charging "hermetic-capillary tube" refrigeration systems quickly and accurately, the Service Products Co. here has introduced the "Way-Gas" refrigerant charging kit.

The kit consists of an accurate weighing scale housed in a special metal case. A flexible charging line and nylon disc seat, all brass, diaphragm type charging valve complete the kit. A drum holder, which packs in the case, holds a 5-lb. drum in position on the scale for either liquid or vapor charging.

The scale has two dials. One is sta-

tionary and indicates the total weight of the drum and refrigerant. The other (inner) dial rotates. It is calibrated backwards so that when the pointer comes to rest at the gross weight, the zero point of the inner dial can be set at the pointer.

When refrigerant is drawn off, the movement of the pointer can be read directly in ounces. The total scale capacity is 11 lbs. The inner "weigh off" dial is calibrated to 5 lbs.

While the kit is designed primarily for liquid charging, vapor charging can also be done. Complete instructions are furnished for both methods.

In outlining the need for the new kit, the manufacturer noted that ice bank applications of the capillary tube system present numerous problems.

**IDEAL**  
*Speed-Freeze*  
**PRODUCTS**

**BEVERAGE COOLERS AND INSTANTANEOUS DRAFT BEER COOLERS.**  
(With Refrigerated Faucets)

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EVERYTHING IN AIR CONDITIONING

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Packaged Central Station Air Conditioner

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Refrigerated Cooler-air Model RK

**usAIRco**

UNITED STATES AIR CONDITIONING CORP.  
MINNEAPOLIS 14, MINNESOTA

# NEW! ...from

## The latest development in small, trouble-free SOLENOID VALVES!

TYPE 2 S  
1/4" or 1/2" ODS ConnectionsTYPE 2 P  
1/4" or 1/2" Pipe Connections

**BOTH**  
Unconditionally  
Guaranteed  
for 18 Months

Jackes-Evans Mfg. Co., some time ago, introduced a line of revolutionary new small solenoid valves. They featured absolutely tight seating and high differential pressure rating — plus — the ability to function properly when installed in vertical lines.

NOW Jackes-Evans is proud to announce that these valves are available with forged bodies — with either pipe thread or solder connections.

The use of forged bodies permits still further simplification of the internal construction — making these valves the most foolproof, trouble-free solenoid valves that money can buy. Why not ask your refrigeration wholesalers about them TODAY!



### All JE Valves Have These 5 Features of Dependability

- Tight Seating — no bubble tolerance.
- Long Life — cool coils.
- Simplicity — only two moving parts.
- Durability — all corrosion-resistant material.
- Opening pressure differential — higher than most others on the market.

See your local refrigeration wholesaler, or write us today for details.

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Key No. ....	Key No. ....
Key No. ....	Key No. ....
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### Products Advertised (list name, page, and issue date)

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## Refrigeration Problems

and their solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

### Net Cooling Capacity Of Room Air Conditioners

#### QUESTION:

In one of your recent issues, I noticed that you gave the tonnage ratings of 2, 3, 5, 7½, and 10 ton conventional store package units. On the basis of the ratings given we are wondering if any deduction was made from the actual B.t.u. of the cooling coil as a result of the B.t.u. of heat generated per k.w. consumed.

To be more specific, according to all electrical engineering sources at our disposal, there is approximately 3,200 B.t.u. of heat generated for each horsepower. For example, the average 5-ton unit will develop and generate five times 3,200 which equals 16,000 B.t.u. of heat or equal to one and one third tons of cooling, which must be consumed in the air conditioned area when a package 5-ton unit is installed in the cooling area.

This would mean that 1½ tons would have to be deducted from the maximum output of the cooling coil capacity in order to secure a just and accurate rating from the machine, when of course the machine is located in the cooling area, such as the average package unit is installed.

We certainly would appreciate an answer from an authentic source on the basis of how these ratings were derived, and whether or not the above fact was considered in determining the ratings as indicated on your chart. Any way that you can handle this matter for us will be appreciated.

#### ANSWER:

Your question is a very pertinent one, for the answer to it has a very important bearing on the net cooling effect obtained from a self-contained conditioner.

In order to simplify the question and make it as clear as possible, let us base it on a one-ton unit, for the same conditions prevail on the larger units.

A ton of refrigeration is, of course, equivalent to the melting of 2,000 lbs. of ice in 24 hours. Converting this

into B.t.u., a ton of refrigeration is heat removal at the rate of 288,000 B.t.u. per 24 hours, (2,000 by 144), or 12,000 B.t.u. per hour.

The refrigeration is produced in the evaporator by the refrigerant, so the suction gas of a one-ton unit is carrying with it the 12,000 B.t.u. per hour removed from the evaporator. The 12,000 B.t.u. per hour will enter the compressor.

(Actually there will be more than 12,000 B.t.u. per hour, for the suction gas will be superheated somewhat in the suction line. On an air conditioning unit, the superheat of the suction gas is comparatively small. Besides, the process is the same, so for purposes of simplicity, let us ignore the superheat.)

As the suction gas is compressed in the compressor it becomes heated, so that by the time it gets into the condenser, it has quite a bit more than the 12,000 B.t.u. in it. How much it is heated will depend on the evaporator temperature, condensing temperature, superheating, etc.

Let us assume that by the time the suction gas gets into the condenser, it has had 2,120 B.t.u. per hour added making a total of 14,120

B.t.u. per hour to be removed by the water in the condenser. This is based on the heat of compression being 15% of the total heat in the condenser.

Of this 14,120 B.t.u. per hour, 12,000 B.t.u. was put in by the evaporator and 2,120 B.t.u. was added in compressing it. That is, the 2,120 B.t.u. represents the amount of work done on it by the compressor.

#### THE USEFUL WATTAGE OF THE MOTOR

Heat is one form of energy; electricity is another. So instead of referring to the amount of work done on the gas in B.t.u., we can refer to it in watts. One watt of electricity is equivalent to 3.412 B.t.u. Therefore, the 2,120 B.t.u. are equivalent to about 624 watts (2,120 ÷ 3.412).

Thus, the compressor has done work on the gas at a rate of 624 watts. That is, the work output of the compressor is equivalent to 624 watts. But the compressor is not 100% efficient. If we assume that it is 80% efficient, then the input to the compressor is work at the rate of 785 watts (624 ÷ .80).

The compressor is driven by the electric motor, so the work done by the motor in driving the compressor is 785 watts. Thus, the output of the motor is 785 watts.

Nor is the motor 100% efficient. Let us assume that it is also 80% efficient. Then if its work output is equivalent to 785 watts, its input must be 981 watts (785 ÷ .80).

The output of the motor was 785 watts which were converted into work in driving the compressor which in turn compressed the gas.

Of the 981 watts input, 785 watts became useful work. What became of the difference between 981 watts input and 785 watts output, amounting to 196 watts? It was turned into heat that warmed the motor and was radiated into the air around the motor.

#### ONLY THE "WASTED" WATTS APPEAR AS HEAT

In the case of the compressor, the output was 624 watts, the input 785 watts. The difference of 161 watts also became heat, which also was radiated into the air around the compressor.

Thus, heat equivalent to 161 watts is produced by the compressor, and heat equivalent to 196 watts was produced by the motor, or a total of 357 watts. Expressed in B.t.u., it is 1,218 B.t.u. (357 by 3.412) or roughly 1/10 of a ton.

That is, for a 1-ton unit, 1/10 of a ton might be offset by the heat thrown off by the motor and compressor. For a 5-ton unit this "waste" heat would be 1/2 ton (1/10 by 5) instead of the 1.4 ton you estimated.

Your estimate was based on the assumption that all of the motor wattage is converted into heat, whereas only about 1/5 of it is. The 3,200 B.t.u. you used is based on about 80% efficiency of the motor, for 746 watts (theoretical watts per horsepower) times 3.412 (B.t.u. per watt), divided by 80% equals approximately 3,200.

Nevertheless, even if it is only 1/2 ton instead of 1.4 ton for a 5-ton unit,

it is still appreciable. What does the manufacturer of the 5-ton unit do about it?

#### FACTORS THAT REDUCE THE 10% LOSS

There are two things he can do: (1) He can use a water-cooled head on the compressor to remove some of the heat from the compressor.

He can use a water-jacketed motor to carry away some of the motor heat.

He can insulate the unit compartment, and install a water coil in it, to carry away the heat produced by the motor and compressor.

(2) He can design his conditioner for about 5½ tons instead of 5 tons. Many manufacturers take this loss into consideration in rating their unit. Also, the supply water to the condenser may be cooler than that for which the conditioner was rated, so the conditioner gains in capacity thereby.

There are a couple of other factors that may tend to remove some of this heat from the motor and compressor, so that it is not put into the room and does not have to be subtracted from the total cooling effect of the evaporator.

1. The outer surface of the water-cooled condenser may be cool enough to carry away some of this heat. Also, there is a cool water supply line, a drain line, water control valve, suction line, etc., that may have some cooling effect.

These cooling surfaces will be especially effective if the unit compartment is insulated.

2. If the condensing unit is the hermetic type that passes the suction gas through or around the field coils of the motor, a good deal of the motor heat is absorbed by the cool suction gas and thus passed on to the condenser and removed by the condensing water.

These two factors can very considerably reduce the loss of total capacity of the conditioner due to motor and compressor heat, so that it may be a very small part of the total cooling capacity of the conditioner.

#### MOTOR CAN CARRY OVER 1 HP. CONTINUOUSLY

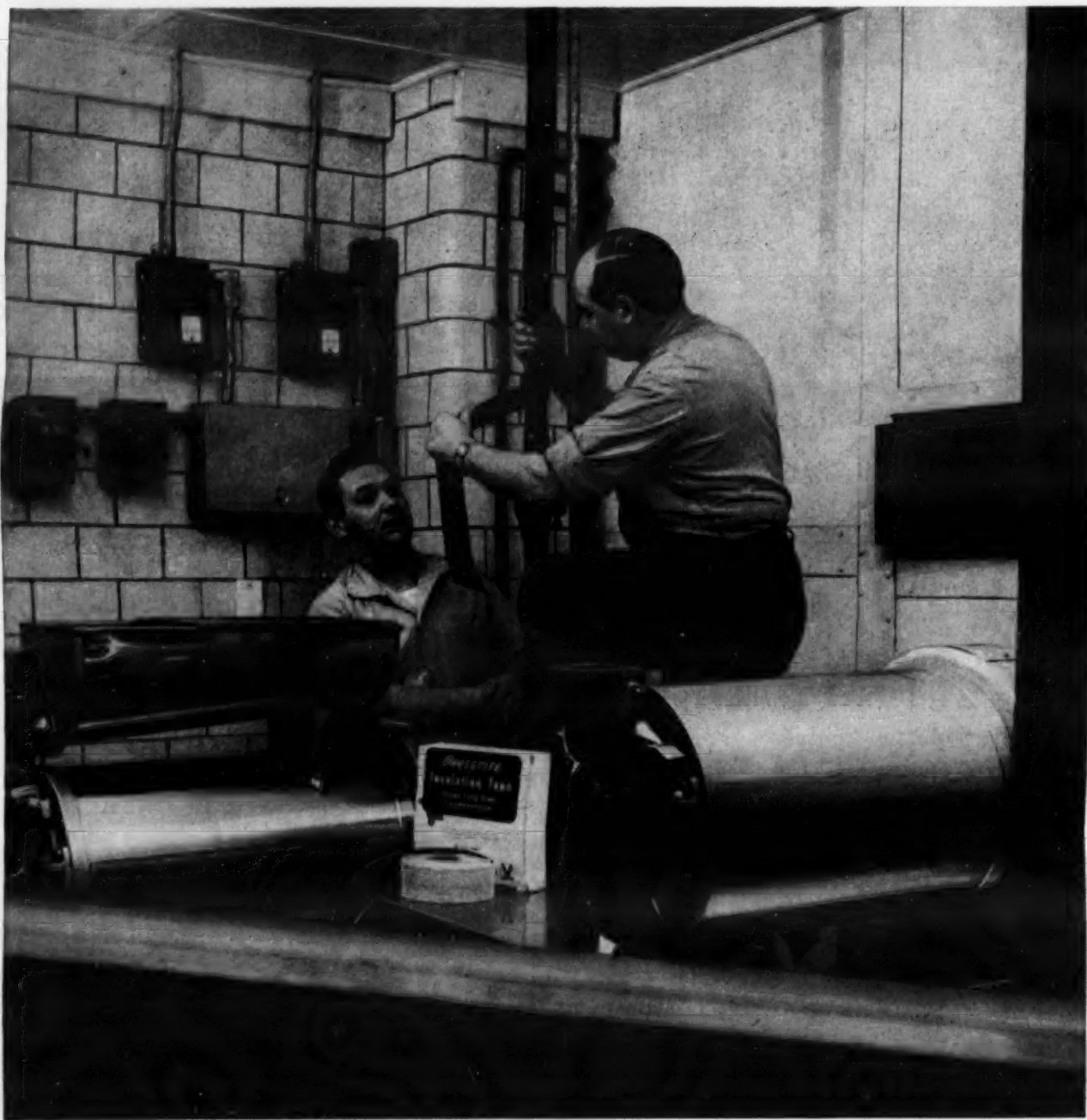
In all of the above, we have considered the motor as 1 hp. and not overloaded; that is, drawing 981 watts at 80% efficiency and producing 1 hp.

Single phase motors of 1 hp. and larger used on condensing units are built to carry 25% overload continuously; that is, they are in reality 1¼-hp. motors. Some of the three phase motors will do this, too.

So our 1¼-hp. motor, operating at 80% efficiency, may be drawing as much as 1,226 watts (981 by 1¼). If we assume that 80% of this extra ¼-hp is doing useful work, then we can conclude that the total cooling capacity will be 14,000 B.t.u. instead of 12,000 (12,000 ÷ (80% by 12,000)).

This extra 2,400 B.t.u. is more than enough to offset the loss due to the cooling unit having to absorb the

(Concluded on next page)



### "You mean that stops the dripping?"

Nothing can be more annoying than constantly dripping suction lines, cold water pipes, valves and fittings. Nothing can solve that problem quicker than Presstite Insulation Tape. It stops the drip, once and for all.

Presstite Tape contains 40 percent virgin cork. It adheres to any dry surface and is so easy to apply. You can build the wrap-

pings up to any thickness you want, and the joints will be self-sealing. No cements or other wrappings are ever needed. Presstite Tape does not harden or become brittle. The convenient easy-to-use package contains a roll of tape 2" wide x 1/8" thick and 30 feet long.

Get Presstite Insulation Tape from your favorite wholesaler.

Or write VIRGINIA SMELTING Co., Dept. 63, West Norfolk, Va.

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Refrigerants

EROTOD • KINETIC CHEMICALS' "FRED" REFRIGERANTS  
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**SILENCE  
IN PROPELLERS  
IS VITAL TO THE  
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**MEIER Nu-air PROPS**  
MANUFACTURERS

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• The public today demands quietness in all air motion equipment. Meier Nu-Air "Quiet" Propellers have met that demand in both evaporator and condenser blades with a "slinger" ring. They give you maximum air movement with minimum H.P. . . . high rate of water dissipation—low noise level. Improve your product's performance with a "Quiet" Nu-Air Propeller . . . write today for complete information.



## Room Cooler Capacity --

(Concluded from preceding page)  
heat thrown off by the motor and compressor.

Naturally, the above figures are somewhat theoretical, but they do show what happened to the wattage put into the motor. The performance will, of course, vary with the design of the individual conditioner.

## B.T.U. PER WATT

If we divide the cooling in B.t.u. per hour by the wattage drawn by the motor, we get a figure referred to as "B.t.u. per watt" which is a measure of over-all efficiency of the unit.

In the above instance, 12,000 B.t.u. ÷ 981 watts gives 12¼ B.t.u. per watt, which is a little higher than ordinarily obtained in practice. The B.t.u. per watts should be not less than 10 however, so with the motor carrying 1,226 watts (125% of full load) the cooling effect should be a minimum of 12,260 B.t.u. per hour, and probably around 13,000 B.t.u., which is enough to offset the motor heat loss, and still leave a net of 12,000 B.t.u. per hour.

ASRE UNIT AIR CONDITIONER  
STANDARD

Manufacturers of all types of unit air conditioners rate their conditioners in accordance with the ASRE Standard Methods of Rating and Testing Air Conditioners, recently revised. This is a rather elaborate and complicated standard in order to be applicable to a wide variety of types and styles of unit air conditioners, and it should be studied in detail for full information on the testing and rating of each type of conditioner.

However, the test methods are so arranged that the net rating does exclude the heat from the motor and compressor, with the result that a 5-ton self-contained conditioner used in the conditioned space does give a net 5 tons of cooling effect.

Dacota Coal, Minneapolis,  
Appointed UsAirco Dealer

MINNEAPOLIS—Dakota Coal Co. here has been named a dealer for the distribution of ½, ¾, and 1-ton window-type room coolers in the Twin-City area by United States Air Conditioning Corp., of Minneapolis.

The appointment marks the entry of the Dakota Co. into the air conditioning field. Dakota is headed by Benjamin S. Kieffer, president.



## Sales

	Per Cent Change				5 Mos. 1953 from	May 1953 Panel No. of Firms Report- ing	Reported Dollar Values (add 000)
	—May 1953—		1953				
	May	April	May	April			
Kind of Business and	May	April	5 Mos.	1952			
Geographic Division	1953	1953	1952	1952			
Appliances and specialties wholesalers	+12	-4	+19	115			22,111
New England	+7	-12	+25	14			1,719
Middle Atlantic	+23	-12	+20	22			6,748
East North Central	+17	-1	+23	21			4,057
West North Central	+12	-23	+26	13			1,171
South Atlantic	+10	+16	+18	16			3,377
South Central	+4	+28	+14	11			2,085
Mountain	-2	-4	+10	7			1,024
Pacific	-7	-10	+17	11			1,930
Refrigeration equipment, parts (com'l)	+26	+21	+15	72			2,594
Middle Atlantic	+35	+19	+12	15			966
East North Central	+10	+14	+9	17			261
West North Central	+12	+9	+18	5			181
South Atlantic	+54	+36	+25	22			678
Pacific	-2	-6	+2	9			203

## Inventory, End-of-Month (At Cost)

Kind of Business and Geographic Division	Per Cent Change —May 1953— from		No. of Firms Reporting	Reported Dollar Values (add 000)
	May 1952	April 1953		
Appliances and specialties wholesalers	+18	-8	92	29,237
New England	+37	-4	10	1,937
Middle Atlantic	-7	-8	19	7,690
East North Central	+37	-8	13	4,129
West North Central	+30	+4	12	3,023
South Atlantic	+27	-10	15	4,597
South Central	+5	-31	9	2,502
Mountain	+36	0	7	2,508
Pacific	+66	+3	7	2,851
Refrigeration equipment, parts (com'l)	0	-2	61	4,082
Middle Atlantic	0	-2	12	1,218
East North Central	+3	-3	12	523
West North Central	-12	-2	5	399
South Atlantic	+1	-6	22	1,143
Pacific	+9	+4	8	629

May Wholesale Sales of Parts, Supplies  
Up 26%; Appliance Volume Rises 12%

WASHINGTON, D. C.—May sales by wholesalers of commercial refrigeration supplies and parts were 26% higher than they were in May last year, the U. S. Bureau of the Census reported recently. Sales for the month were 21% higher than in April.

For the first five months of the year, these wholesalers enjoyed a sales volume 15% higher than last year. Their May inventories were the same as last year, but were 2% smaller than in April.

Wholesalers of appliances and specialties reported that their May volume was 12% higher than last year, but 4% lower than April. For the first five months, they scored a 19% gain over last year.

May inventories of this group were 18% larger than last year, but 8% smaller than in April.

The average of sales by wholesalers of all types showed a 4% gain over May 1952, a drop of 5% from April, and 5% gain for the first five months.

Barber-Coleman Divisions  
Open Factory Branch Offices

ROCKFORD, Ill.—The Automatic Control and Uni-Flo divisions of Barber-Coleman Co. announce the opening of two new factory branch offices, one in Syracuse, N. Y., and the other in Jacksonville, Fla.

The manager of the Syracuse office, located at 218 Harrison St., is K. C. Watson. D. W. Minick will manage the Jacksonville office located at 1143 Mary St. Both offices will handle the sale and service of automatic control and air distribution products.

The opening of these new offices brings to 54 the total number of field offices in the nationwide sales and service organization of Barber-Coleman.

G-E Announces New Line  
Of Home Heating Controls

SHENECTADY, N. Y.—A new line of simplified home heating controls for all makes of domestic oil burners has been announced by General Electric Co.'s Appliance Control Department.

The line includes nine devices: a room thermostat, master control with bimetallic helix, flame detector and companion master control, transformer relay, fan and limit control, temperature limit control, water immersion temperature control, and a steam pressure control.

All are designed for fast, easy installation and fewer service calls, according to G-E engineers. They may be mounted in any position without leveling, and feature easily-removable covers.

The room thermostat, which can be calibrated without tools, has a comfort dial allowing home owners to adjust the time cycle to home heating conditions. It can be converted to an automatic day-night thermostat by adding an ordinary radio resistor and time-switch clock.

The stack-mounted master control with bimetallic helix requires no adjustments or leveling. The machine-calibrated device is in a dustproof enclosure.

In case of flame failures, oil burners can be shut off in four to seven seconds by the new flame detector which has a nichrome-and-quartz detector rod sensitive to 30° temperature changes. The control can be mounted almost any place where temperature changes, including in the stack or combustion chamber.

Companion to the flame detector is

the master control, mountable on the side of the furnace or on the gun burner. Factory calibrated, the control needs no adjustment or leveling and has a recycling feature for temporary flame failures.

The transformer relay, a two-purpose control, operates a line-voltage load, such as a motor, from a low-voltage thermostat or other control. It can be used in oil burners, water circulators, unit heater fans, and cooling system condensing units.

For warm air furnaces, the fan and limit control helps protect against excessive bonnet temperatures and has a summer switch which permits fan-cooling in hot weather. Fan-on settings are possible between 100° and 200° and a limit scale sets anywhere between 130° and 250°. A mechanical interlock prevents wrong setting that would cause fan-off cycling on the limit switch.

Also for warm air furnaces is the temperature limit control which requires no leveling. To comply with some local ordinances, stops on the temperature dial are at 200°, 250°, and 300° but are easily removable if not needed.

The water immersion temperature control for hot water systems features a dry well which helps protect the helix. The entire control, including the helix, can be removed from or placed into the dry well without tools. An adjustment setting slot protrudes through the cover and can be turned with a coin.

The steam pressure control is available for standard male and female compression fittings in any range of pressures and for various types of steam operation. Adjustments for range and differential are made by turning acorn nuts.

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has improved  
lots of things!

U. S. PAT. NO. 2,297,928



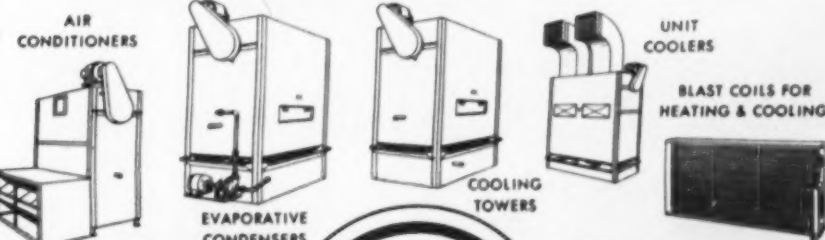
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ORIGINATORS OF COMPLETELY PACKAGED  
AIR CONDITIONERS

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That's why so many Governair Completely Packaged Air Conditioners are in use today. They are engineered and built by the pioneers of large size packaged air conditioning — Governair!

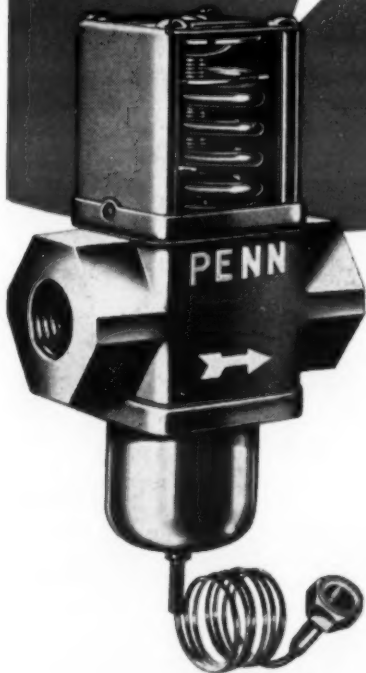
If you want a package deal that will do a better job of air conditioning for you choose Governair! Sized from 3 to 60 tons. GOVERNNAIR CORPORATION, 513 N. Blackwelder, Oklahoma City, Okla.



## GOVERNNAIR

ORIGINATORS OF COMPLETELY PACKAGED AIR CONDITIONERS!

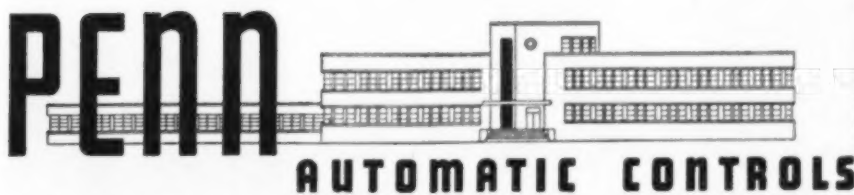
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all these features!



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- ★ Highly Sensitive to Refrigerant Head Pressure
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- ★ Easy Manual Flushing
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These valves are built in sizes from ¾" to 2½" and in flanged or threaded styles. Ask your wholesaler or write Penn Controls, Inc., Goshen, Ind. Export Division: 13 E. 40th Street, New York 16, N. Y., U. S. A. In Canada: Penn Controls Limited, Toronto, Ontario.



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## Air-Cooled Condensers—2

Data Covering Design, Application, Selection  
Of Kramer Trenton 'Unicon' Outlined by Segal

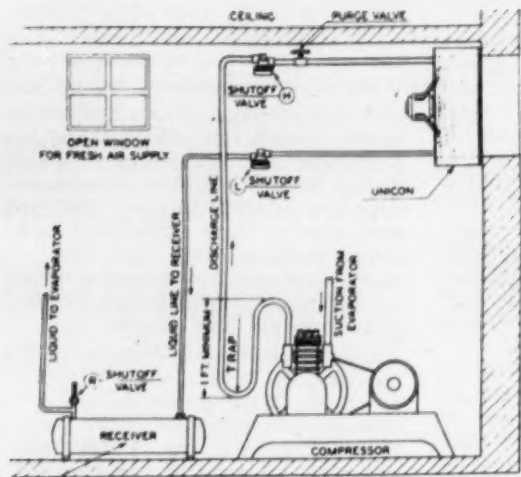


FIG. 3 (LEFT) is a typical installation of Kramer Trenton's air-cooled condenser.

**Editor's Note:** This is the second instalment of a two-part article reporting the talk given at a Detroit ASRE meeting by S. Charles Segal, general sales manager of Kramer Trenton Co., on the company's "Unicon" air-cooled condenser.

In the first section of the talk, which has also been given before various other groups throughout the country, Segal reviewed the development of the condenser and gave examples of how it is selected. In this concluding instalment he discusses various application problems.

"The Unicon, like an evaporative condenser, can be located at any desired distance from the compressor. It is not necessary to install it at the same level as the compressor. It may be above or below the compressor, and can be mounted indoors or outdoors.

"When the Unicon is mounted indoors the air leaving it must be discharged to the outside to prevent the recirculation of heated air through

the unit. With the air being discharged to the outside, provision must be made for a fresh air intake. (See Fig. 3.)

"Should it be necessary to duct the discharge air from the Unicon to the outside, the standard fan-motor assembly on the unit will handle external resistance of approximately 50 ft. of straight duct or 10 ft. of straight duct with one 90° elbow, provided the size of the duct is the same as the discharge area of the condenser. For ducts of greater length or of smaller cross-section, special fans and motors can be furnished.

"Both the direct drive models and the belt-driven models are designed for simple outdoor mounting. All models are designed to be used outdoors and exposed to the elements without any special enclosures. It is, in reality, exposed to the same weather conditions as an automobile.

"All the coils are constructed with copper tubing, aluminum fins, and aluminum casing. The air handling section of the largest units is made of steel, suitably protected against

weather. All smaller sizes have all aluminum casings," Segal said.

"From the 15 years' experience with these installations, Kramer has developed a wide variety of mounting means: mounting flanges on both faces in the identical manner of a blast coil, legs for floor or roof mounting, brackets for mounting on solid walls, and brackets for suspension from ceiling.

"The Unicon does not require any special piping. The same refrigerant piping used with evaporative condensers should be used.

"If a vertical discharge riser is used, a loop should be installed near the compressor discharge to prevent condensed liquid refrigerant or oil from causing damage to the compressor (Fig. 3). The height of the loop should be 6 in. for every 10 ft. of vertical discharge line.

"A check valve may be used where it is impractical to make the loop. Service hand shut-off valves should be installed in both lines to the Unicon," Segal suggests. "A purge valve should be installed at the highest point of the discharge line.

"From the point of view of initial and operating costs, it is preferable to use a separate Unicon with each small compressor instead of using multiple circuit condensers. Most models are furnished with a single circuit. In lieu of multiple circuits, the use of multiple mounting stands for mounting two or three models, one on top of the other to make a single assembly, is suggested. (See Fig. 2.)

"Two problems are encountered during winter operation with the Unicon under low outside temperatures (identical problems exist with evaporative condensers):

(1) Maintaining satisfactory operating head pressures during low outside temperatures.

(2) Failure to start when the compressor motor is pressure actuated and when the ambient temperature around the Unicon is at or below the refrigerated space temperature.

"During winter operation with low entering air temperatures to the Unicon the head pressures are apt to drop to an objectionably low level, sometimes causing sharply reduced expansion valve capacity by reduction of liquid pressure available at the entrance to the expansion valve.

## Service & Supplies

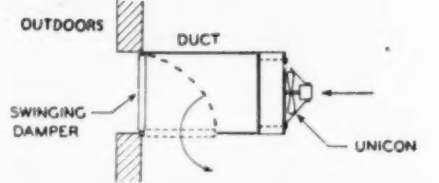


FIG. 5 (ABOVE)—With this damper arrangement, "Unicon" serves as ventilator in summer, unit heater in winter when damper is closed as shown.

"The Unicon can easily be blended into the structure of the house. Some of the suggested locations are storage shed, garage, dormer, attic, basement, porch, outside.

"In the first four applications it was found advisable to have the air pass through the unit first and then discharge into the inside area. This permits the lowest possible entering air temperature to the Unicon for maximum capacity and at the same time it will ventilate the air space.

"A typical example of the residential application is the home of D. J. Lindsay, Jr. at Sarasota, Fla. A belt-driven Unicon is mounted in the rear wall of the garage.

"By the use of a short duct and a swinging damper (Fig. 5), the Unicon can serve a dual purpose in addition to condensing refrigerant.

"During the summer, the damper is in the horizontal position. The unit then acts as a ventilator, removing air from the inside and discharging it outside. The fans can be controlled to act as ventilating fans even when the compressor is off.

"During the winter, the damper is in the vertical position. The unit then acts as a unit heater; it discharges heated air back into the room. Thus, the Unicon can be used to help heat an area.

### ENTIRELY AUTOMATIC EXCEPT SPRING, FALL SETTINGS

"Except for the manual closing of the hand valve in the fall and opening it in the spring, the system is completely automatic," Segal said.

"Even these two manual operations, performed once a season, may be cheaply eliminated by the use of a solenoid valve, temperature actuated, in place of the hand valve.

"Where compressor starting is pressure actuated and under extremely low outside temperatures surrounding the Unicon, the crankcase pressure may not rise sufficiently to actuate the pressure switch. Whenever the design outside temperature at the Unicon is expected to be at or below the refrigerator temperature, we recommend the use of a thermostat to control compressor operation.

"Since it is usually desirable to retain the pressure switch as a safety, the pressure switch may be used in series with the thermostat. In such cases the cut-in pressure settings should be below the normal operating pressure, while the settings of the thermostat should be adjusted for the desired refrigerator temperature.

"As a result of careful research and testing, Unicon Models BD300, BD500, and BD750 were specifically designed for residential applications where very low noise level is required.

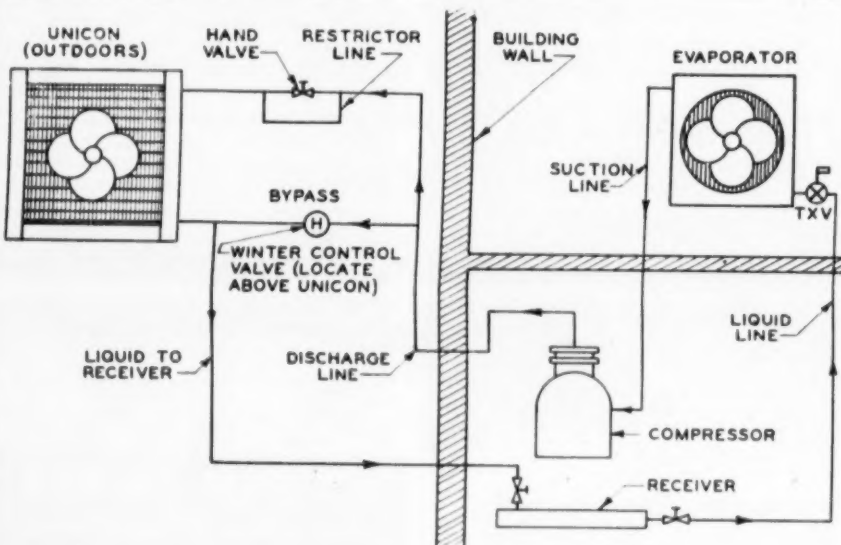
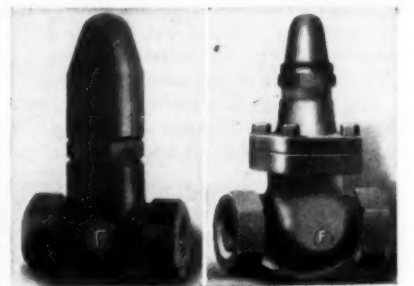


FIG. 4—For winter operation, Kramer suggests using its winter control which varies capacity of condenser by flooding it.



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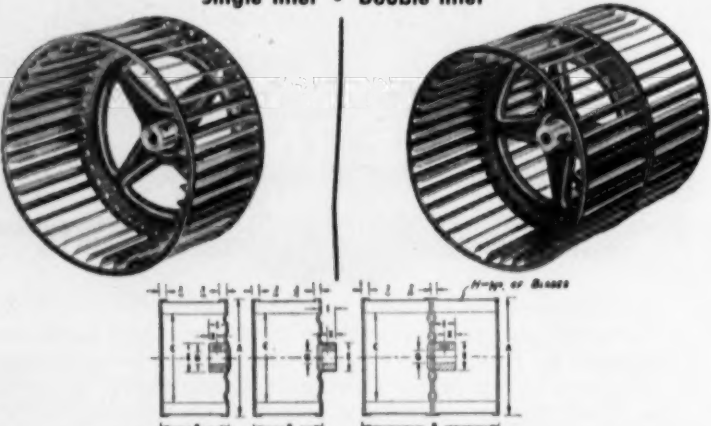


single and double inlet

## WELD WHEELS

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Single inlet • Double inlet



Wheel No.	A Dia.	B—Width			C	E	G—Bore			I	X	M
		Min.	Max.	Std.			Min.	Max.	Std.			
WW 4 1/4	4 1/8	1 3/4	3 1/2	2 1/8	3 1/8	1	1/4	1/2	1/4	1 1/8	1/4	22
WW 4 3/4	4 3/8	1 3/4	3 1/2	2 3/8	3 3/8	1	1/4	1/2	3/8	1 1/8	1/4	24
WW 5	5 1/8	1 3/4	4	2 1/2	3 3/8	1 1/4	1/4	1/2	1/2	1 1/8	1/2	26
WW 6	6 1/4	1 3/4	4	3	5	1 1/4	1/4	1/2	1/2	1 1/8	1/2	32
WW 7	7 1/2	1 3/4	4 1/2	3 1/2	6 1/8	1 1/4	1/4	1/2	1/2	1 1/8	1/2	38
WW 8	8 1/8	1 3/4	4 1/2	4	6 1/8	1 1/4	1/4	1/2	1/2	1 1/8	1/2	40
WW 9	9 1/8	1 3/4	4 1/2	4 1/2	7 1/8	1 1/4	1/4	1/2	1/2	1 1/8	1/2	40
DWW 4 1/4	4 1/8	3 1/2	7	4 1/4	3 1/8	1	1/4	1/2	3/8	1 1/8	1/4	22
DWW 4 3/4	4 3/8	3 1/2	7	4 3/4	3 3/8	1	1/4	1/2	3/8	1 1/8	1/4	24
DWW 5	5 1/8	3 1/2	8	5	3 3/8	1 1/4	1/4	1/2	1/2	1 1/8	1/2	26
DWW 6	6 1/4	3 1/2	8	6	5	1 1/4	1/4	1/2	1/2	1 1/8	1/2	32
DWW 7	7 1/2	3 1/2	9	7	6 1/8	1 1/4	1/4	1/2	1/2	1 1/8	1/2	38
DWW 8	8 1/8	3 1/2	9	8	6 1/8	1 1/4	1/4	1/2	1/2	1 1/8	1/2	40
DWW 9	9 1/8	3 1/2	9	9	7 1/8	1 1/4	1/4	1/2	1/2	1 1/8	1/2	40
—	—	—	—	—	—	—	1.114	3/8	3/8	1/2	1	3/8
—	—	—	—	—	—	—	1 1/4	3/8	1/2	1 1/8	1/2	—

Write for Catalog Page 707-11

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Contains dozens of exact replacement controls not previously available from any source! See a copy at your Ranco wholesaler.





## Retail Credit Form

Information Necessary for Accurate Check of Customer's Credit  
Should Be on Application To Be Filled Out at Time of Sale

CHICAGO—Credit must not be given promiscuously or dealt with haphazardly.

Joseph Fleischaker, Will Sales Co., Louisville, Ky., emphasized that point in suggesting to retailers recently how credit should be extended to customers. He spoke at the mid-year meeting of the National Appliance & Radio-TV Dealers Association.

Fleischaker first listed the information which should be obtained from customers and recorded on a credit application form, or "acquaintance blank," as his company calls its form.

### PRELIMINARY QUESTIONS

"After a customer has been sold," he explained, "the following questions must be answered in detail:

- "1. His full name—not initials.
- "2. His age. Thereby hinges the important subject of dealing with a minor.
- "3. Is the person married?
- "4. What is the present address of your customer?
- "5. Is he a householder, a lodger, or a boarder?
- "6. Does he own an automobile?
- "7. How long has he lived at his present address? From whom does he rent or from whom is he buying a house? Then the address of the party.

"Now comes a very important question. What is the former address of this customer; whom did he rent from and what was their address? How long did he live at the former address?

"In our particular part of the country we ask the nationality because some of our people have better paying habits than others. Also, their residence phone number and their business phone number.

"We have now asked the basic questions to determine their stability, based on present location, their

former location, and the general psychological questions that influence the credit manager."

In the second part of the acquaintance blank, Fleischaker said, the following questions are important:

The name of the firm the customer works for and its address, what position he holds, and how long he has been in the present position, and his badge or clock number.

"So important and so necessary is this part of the contract that no piece of merchandise should be delivered without definite verification of all these questions," Fleischaker stressed.

He said dealers should also find out the firm's business and, if at all possible, the name of the foreman, superintendent, steward, or department manager. "A good control should also include the name of the former employer and how long the person worked for that concern," he stated.

Fleischaker continued: "Now, you have two legs on which to base your credit. Your next question is the wife's name, where she is employed, and how long she has been employed in her position. That further adds stability to your contract.

### NAME OF CUSTOMER'S PARENTS

"We are now going to put the third leg under our credit table and these questions must be answered. The name of the husband's parents and their address and the name of the wife's parents and their address.

"You should also ask for the name of someone with whom they had credit accounts, and their address. That will very often help you avoid a skip.

"Another important question is if a person has had an account and if it is paid out, how long since it has been paid out? Your date must be put on the contract to make it legal

and how long the person has lived in a particular city or county."

To round out this last series of questions, Fleischaker stated, the dealer should ask who recommended the customer to the store and, if possible, that person's name and address.

"The fourth leg of our table, as in all constructions, must be our strong leg," he pointed out.

### CREDIT, BANK REFERENCES SHOULD BE SPECIFIC

"You must ask them, number one, for definite credit and bank references and, when you ask for bank references, be sure to include branches, savings, loans or checking accounts.

"When you ask for business references, ask for the account number if possible to help your credit department expedite the information.

"The salesman must then list the article purchased with the model number and stock number, explaining the price, the interest fee or carrying charge, any warranty charges, and everything that they are responsible for contracting to pay for.

"You then have to explain your trade-in allowances and put that on the contract, and your agreed deposit in cash or c.o.d.

"Now we are at the threshold where credit really begins. It is important that the terms be made weekly or bi-monthly. My firm and myself are dead set against monthly payments.

"The customer must definitely know the day and date when his payments start and you must tell him exactly what the delivery instructions must be to the date when he can expect the product in his home.

"At that time you will ask him for a personal reference and tell him that we have now completed a bona-fide contract which he will seal with his signature in his name, or, if his wife is buying it, in her given name. That contract should then be turned over to the credit department for investigation.

### CUSTOMER SHOULD GET TERMS OF CONTRACT IN WRITING

"This," Fleischaker stressed, "is only the beginning in extending retail credit to your customer. Once the article has been approved and delivered, it is necessary for you to send out to the customer by mail, a book or a coupon book showing their correct purchase price less down payment and trade-ins and explaining again in black and white the customer's contractual obligation to your firm." And, he added, the dealer should include a letter of thanks over his signature.

"You must then be ever watchful that the customer makes the payments as agreed and if he misses one week on a weekly payment or two weeks on your bi-monthly payment, he should receive a letter reminding him of his obligation to pay for the product purchased," the dealers were advised.

"Delinquencies must be followed up in a series of strong, simple letters. By the end of 60 days, if no payment has been made, it is your duty to go out and repossess the merchandise.

"There are different theories on repossessions," Fleischaker said, "but it is my personal belief that you must be firm, steadfast, courteous, and intelligent so that the products that are not being paid for are back on your floor, put in re-salable condition, and sold once again."

## Redmond Announces Executive Changes To Strengthen Division

OWOSSO, Mich.—Several executive changes have been made in the Redmond Co., Inc., manufacturer of fractional horsepower motors, James W. Tweedy, executive vice president and general manager, announced recently.

Glen L. R. Baumhardt has been appointed director of purchases, Harvey B. Wilgus has been elevated to general sales manager of the induction motor division, Annas Laurent was named division manager of special products, A. G. Braley was appointed general staff assistant to Tweedy, John T. Howes became chief design engineer in charge of the design engineering department, and Roger Thomas was made a staff assistant.

Tweedy said these appointments were made to strengthen the Induction Motor Div. of the company.

Baumhardt, in his new position, is in charge of all procurement for the series and induction motor divisions of the company. He joined Redmond in February, 1940 as a laboratory assistant. Later he was made sales engineer and in 1943 assumed the duties of sales manager. In 1948, he became vice president in charge of sales-engineering departments.

Wilgus joined Redmond in February, 1948 and was subsequently appointed central area sales manager. He remained in that capacity until December, 1950 when he was put in charge of special products sales. In January, 1953 he was appointed division manager for special

products. His new duties entail responsibilities for all induction motor and special products sales.

Laurent came to Redmond in 1940 from the Emerson Electric Co. Prior to his new assignment, where he replaces Wilgus, he held positions in the production, sales, and purchasing departments.

Braley joined Redmond in June, 1935 in Flint, Mich. upon completion of his schooling. He was advanced through the positions of planning manager, production manager, and general manager of the Jacksonville, Ark. plant. In his new position, he will handle special projects and surveys for Tweedy.

Howes came to Redmond in February, 1948 as a motor design and development engineer. In his new position he will be in charge of product design, model shop, design improvement, experimental chemical laboratory, and research and life test functions.

Thomas began work for Redmond in 1940. Interrupted by two periods of military service, he held jobs in the planning and tool design departments. Last April he was promoted to tool designer.

## Pittsburgh Gets New I-H Distributor

PITTSBURGH—Television & Appliance Distributors Co. has acquired the distributorship of International Harvester room air conditioners, dehumidifiers, refrigerators, and freezers, reports W. K. Scott, co-owner.

Freezer Foods Co., a dealer here, has been promoting this International Harvester line with television spot advertisements.

... at long last!!

## CLEAN CONDENSERS

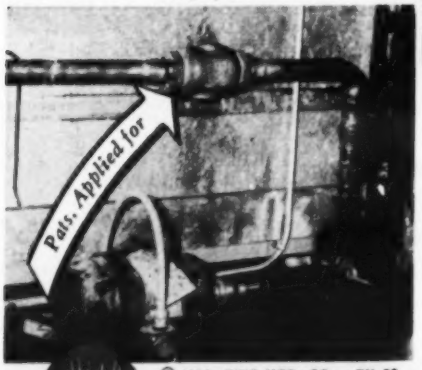
Without ACIDIZING OR RODDING!



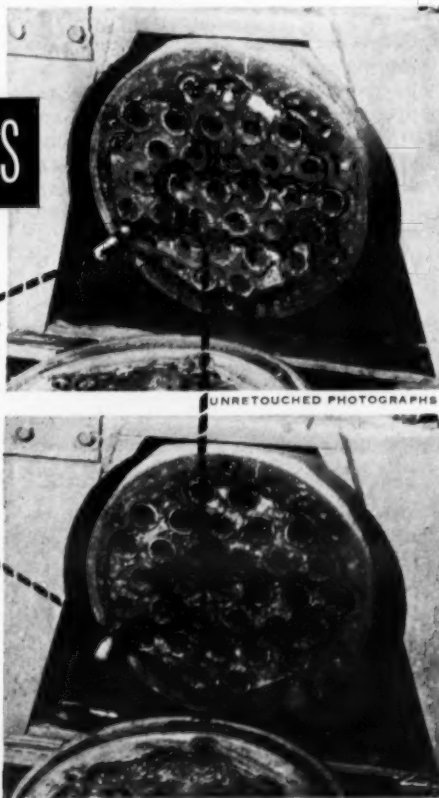
AUGUST 5, 1952

High Efficiency  
Low Maintenance

Buchanan Refrigeration Service (of Redwood City) made the Broadway Market installation. Foreman (of Belmont, Calif.) made the photographs.



© 1953, EVIS MFG. CO. EV-63



The Broadway Market, in Redwood City (Calif.), is but one of many hundreds of amazing EVIS Water Conditioners are conquering scale in practically all types of refrigeration equipment. The top photograph was made of the time the Evic was installed . . . a quarter-inch rod was driven through the tubes . . . two weeks later much of the scale was sufficiently soft to be prodded out with a small diameter tube . . . the condenser was not opened again for six months . . . the bottom photograph clearly shows what the EVIS had accomplished.

If Evic Conditioners are not yet available in your locality . . . phone or write your nearest Evic Regional Distributor for complete information.

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NORTH-EVISCORP

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RENO

WATER CONDITIONERS

WATER CONDITIONERS

WATER CONDITIONERS

WATER CONDITIONERS

WATER CONDITIONERS

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SEATTLE

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2837 E. Marginal Way, EL 6-1118

CHICAGO

EVIS-GREAT LAKES COMPANY

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EVIS-SOUTHEAST CO.

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EVIS-SOUTHEAST CO.

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## HOW TO APPLY VALVES

By A-P Controls Corp., Milwaukee

### Thermostatic Expansion Valves (7)

#### 3. BLEED OR BY-PASS TYPE

Like automatic expansion valves, thermostatic expansion valves can be provided with a by-pass or bleed slot to provide off-cycle unloading where required due to employment of low starting torque motors.

No standard devices of bleed-type thermostatic expansion valves as regular stock items are available, but on special order valves with a bleed slot suitable for a particular application can be obtained.

Determination of proper size bleed slot is done chiefly by experimentation, a valve with a relatively small sized slot representing the logical valve with which to start. As in the case of automatic expansion valves, the smallest bleed slot which will provide the required unloading is the proper size for a particular application.

#### VALVE CAPACITY RATINGS

Thermostatic expansion valves are rated in B.t.u. or tons per hour at the various suction temperatures (low side pressures) at which the mechanical system employing the valve may operate. A-P Controls valves are rated according to A.S.R.E. standards for testing and rating thermostatic expansion valves, valve capacities being indicated for operating

suction temperatures of plus 40° F., plus 20° F., minus 10° F., and minus 40° F.

There are a number of factors which affect thermostatic expansion valve capacity, the design of the valve representing a fixed factor but being only one of several factors that determine the amount of refrigeration of which a particular valve is capable. Variable factors which affect valve capacity are as follows:

#### (1) Evaporating Temperatures.

Examination of a thermostatic expansion valve capacity chart reveals the fact that valve capacity drops as evaporating temperatures drop. This phenomena can be explained as follows:

(a) Reduction of evaporating temperature reduces the latent heat absorbed per pound by the evaporating liquid refrigerant. As a result, fewer B.t.u. are absorbed per pound of liquid handled by the evaporator, and over-all refrigerating capacity drops although the rate of liquid supply to evaporator remains constant.

(b) Superheat change. Thermostatic expansion valves are rated on a certain number of degrees of superheat change between valve opening point and operating point. A particular superheat change at a relatively low temperature such as 0° F. represents a smaller increase in power element pressure on valve diaphragm than does this superheat change at 40° F.

This drop in effectiveness of superheat change as evaporator temperature decreases is due to the characteristics of the power element charge. The net result, other conditions remaining the same, is less valve opening and therefore a smaller rate of refrigerant flow as evaporating temperatures decrease.

#### (2) Subcooling of Liquid Refrigerant.

A-P Controls thermostatic expansion valve capacity ratings are based upon 100° F. saturated liquid temperature at valve inlet, corrected to 0° liquid inlet subcooling and 0° evaporator superheat. Any subcooling of refrigerant liquid below the saturated (condensing) temperature will simply add to the over-all valve capacity.

This is due to the fact that plus 100° F. liquid, for example, which will evaporate in the low side at plus 40° F. must be reduced in temperature to plus 40° F. before boiling and absorption of heat from the area surrounding the evaporator can begin.

This reduction of liquid temperature from plus 100° F. to plus 40° F. is accomplished by "flashing off" a certain quantity of refrigerant liquid, liquid which is wasted as far as absorption of heat from coil surroundings is concerned.

If the refrigerant liquid in this case was at a temperature below plus 100° F. upon entering the valve, less "flash off" would be required to reduce liquid temperature to plus 40° F. A higher percentage of liquid refrigerant entering the coil would therefore be available to absorb the heat load the system is to handle.

(To Be Continued)

### Industrial, Health Benefits Cited

## Tropical India Plans To Put Air Conditioning To Work In Building Up National Economy

BOMBAY, India—The air conditioning and refrigeration trade of India aims to become an industry playing "a very important role in national development."

This objective was cited by E. A. Bertsch, outgoing president of the Refrigeration & Air Conditioning Trades Association, Ltd., Bombay, at the group's fourth annual general meeting. But, he stressed, the government must relax import and other regulations now restricting expansion of the trade if this goal is to be achieved.

"India," he noted, "is a country with a hot sub-tropical and tropical climate which subjects all production, storage, efficiency, and health to a certain strain which can be overcome by scientific application of air conditioning and refrigeration."

"Already it is being realized in the production, processing, and distribution of food stuffs and medicines that climate control avoids waste and increases output. The same applies to many other industries."

"It should particularly apply to the human factor and it appears to me that the attitude that looks at so-called 'comfort' air conditioning as a luxury for the idle rich, overlooks the productive, social, and hygienic effects of air conditioning on human beings in a hot country."

"We visualize the future," Bertsch said, "as a period of gradual conversion from an air conditioning and refrigeration trade to an air conditioning and refrigeration industry. I may mention here that last year alone some 500 room air conditioners were assembled and partly manufactured in India and have proved fully satisfactory in use."

However, he pointed out, "the manufacture of highly-specialized engineering items, of which air conditioning and refrigeration machinery is composed, requires a certain volume before it becomes economical within the framework of national economy and profitable for the manufacturer."

"This minimum economic volume will be reached in India within the foreseeable future, I am sure, but it is not here now and we won't get nearer our target if import regulations restrict the expansion of our trade."

"Several of our member firms have been engaged for some time in the manufacturing of certain component parts and auxiliary equipment and our plans are to increase this local manufacture. But there is a hard and large core of specialized machinery which cannot yet be manufactured here because the volume is too small and import of such items would have to continue for some time."

"The more generous the government is in allowing imports of certain air conditioning and refrigeration machinery now and during the next few years . . . the sooner shall we all be in the position to tackle manufacture on a larger scale and convert our 'trade' into the desired 'industry'."

Bertsch also declared that "if we are forced by import and other restrictions to limit our activities, we cannot provide the opportunities of training up the various cadres of experts that compose our technical staff . . . They gain experience only by doing actual jobs. No jobs—no experience."

"This is another reason why we should like to impress on the authorities concerned to make it possible

for us at least to meet a larger part of the demand which already exists for equipment in India today."

In this connection, Bertsch noted that the Munir Fazelbhoj School of Refrigeration and Air Conditioning in Bombay has been doing "sterling work" in training servicemen for the last three years.

Another point made by Bertsch was that the characteristics of the trade are such that its activities "cannot be confined to a few cities and in the hands of a few big firms."

"On the contrary, this industry will require and will bring into existence a large number of small independent enterprises spread over the entire country, engaged in installation, service, maintenance, etc. I visualize hundreds of small independent jobbers and distributors in many cities taking, in the not-to-distant future, to the ever-growing refrigeration and air conditioning trade."

Earlier in his address, Bertsch outlined some of the fields now being served by the trade.

"The vocation and sole activities of most of the members of this association," he stated, "are the construction and keeping in good running order of cold storage and air conditioning plants required for the preservation of perishable foods, and the conditioning of other countless delicate and heat-sensitive articles during processing and transport in the chemical and pharmaceutical industry and the medical profession."

"We are helping to a great extent the various departments of the Army, Navy, and Air Force in solving their technical problems . . ."

"The departments of Agriculture and Fisheries, the Railway, the many new scientific laboratories and institutes, which have recently been built and which are the legitimate pride of New India, need our cooperation."

"Not to forget the help we are rendering to a number of new industries which need air conditioning and process cooling . . . the rayon industry and penicillin manufacturing."

"Even the construction engineer is calling on us to pre-cool the aggregate materials which go into large solid concrete dams . . ."

"There are thousands of air conditioning plants in public buildings, offices, factories, homes, hospitals."

Bertsch was succeeded as president of the association by J. C. Kapur. Other officers are J. Holck-Larsen, vice president; Fazal D. Chinoy, treasurer; and Y. A. Fazalbhoy and H. K. Ghosh, secretaries.



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The seal is made in such a way that it does not change the diameter of the tube. This makes it possible to pass the tube through any opening large enough for the tube itself. Economical tube sizes range from 1/8" to 3/4" O.D.

And, for your greater convenience, Dryseal is packed in a fifty-50 one-coil carton. This carton, which has been attractively designed for easy identification in stock, contains one 50-foot coil of Dryseal . . . is easier to handle, light weight, economical and is sturdily made to assure protection of the tube.

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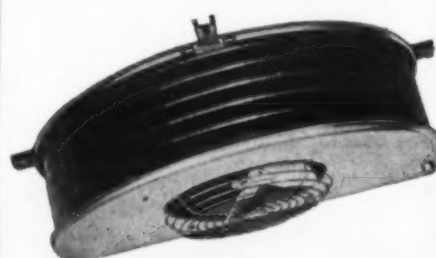
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Write for Bulletin C-192

**KRAMER TRENTON CO. • Trenton 5, N.J.**



## Additional Rent Increase Denied--

(Concluded from Page 1, Column 4) them normally in the hot spells only, and for the period of time they were at home, used them continuously day and night, not only for the five-month period but throughout the year.

For these reasons landlords asked permission to increase rents during the five-month summer period as follows: 1/2-hp. unit, \$8.50 per month; 3/4 hp., \$12; 1 hp., \$18; 1 1/2 hp., \$25 a month.

It was claimed by landlords that the window units were being used an average of 1,800 hours a year for cooling and that the blowers were used for the rest of the year.

This figure was disputed at the hearing by Nathan Edelstein, general counsel for the Refrigeration Air Conditioning Contractors Association of New York, who expressed the view

that 600 hours would probably be the average.

It was finally conceded by industry representatives at the hearing that as a compromise, not because they considered it accurate, and because no accurate figures were submitted by the landlords, that there might be an average usage of six hours a day, or 900 hours for the five months.

At an average current consumption of 1 1/2 cents/kwh., a figure suggested by a Consolidated Edison official, the 900 hours usage would represent \$13.50 for five months, or \$2.75 a month, much below the amount allowed landlords under the May 20 order.

The industry representatives agreed, however, that if the landlords could show by actual objective figures and surveys that the amount in the order was insufficient, they would change their present knowledge and thinking in the matter.

Pertinent points of the May 20 opinion issued by Administrator McGoldrick were as follows:

(1) A tenant who pays for the electricity supplied to his apartment directly to the utility company wishes to install an air conditioning unit which will rest on part of the window sill and will be secured from the inside. The unit will be entirely within the window line with exception of about 6 in. which will protrude beyond the window sill, and no part of the unit will be attached to or touch the outside of the building in any way. Will an order increasing the maximum rent pursuant to Section 33(1) of the Regulations be issued by the Local Rent Administrator on the landlord's application by reason of the installation of the air conditioning unit by the tenant in the manner described?

No. The air conditioning unit, if installed in the manner described by the tenant, will have its physical origin and attachment in the apartment and will be incidental to the tenant's enjoyment of his housing accommodations. It will differ not at all from an electric fan or any other electrical appliance which the tenant may purchase for his use and enjoyment. Since the tenant does not require the permission of the landlord to bring in and operate such normal electrical appliances, the landlord would not be entitled to an increase in the maximum rent by reason of the installation. The Administrator in arriving at this opinion has adopted the reasoning of the Court in *Taft Construction Corp. v. Bachnoff* (107 N.Y. S. 2d 898), affirmed App. Term, 1st Dept.

(2) If, however, the air conditioning unit is so installed that it protrudes beyond the window sill to such an extent as to require landlord's consent under the law, the Local Rent Administrator will increase the maximum rent in the sum of \$2.00 per month upon application by the landlord.

(3) Where the landlord furnishes un-

metered and unlimited electric service to the tenant under a rent inclusion plan, the Local Rent Administrator will approve increases for the electricity to be consumed in the operation of the air conditioning unit in the following amounts:

1/2-Ton Unit	.....	\$3.50 per month
3/4-Ton Unit	.....	4.50 per month
1-Ton Unit	.....	7.00 per month
1 1/2-Ton Unit	.....	9.00 per month

(For the months of May through September, inclusive)  
The foregoing allowances have been calculated on the basis of average normal use of a window-type room air conditioner in New York City during the period from May through September.

## Hotpoint Prices--

(Concluded from Page 1, Column 3) These increases took effect on July 20.

The increases are as follows:

REFRIGERATORS		
Model	Old Price	New Price
EA-92	\$269.95	\$279.95
EAS-92	289.95	299.95
EC-87	349.95	359.95
EH-95	429.95	449.95
EH-110	509.95	529.95
RANGES		
RB-30	\$169.95	\$179.95
RB-34	179.95	189.95
RB-49	189.95	199.95
RB-50	229.95	239.95
RB-51	259.95	269.95
RC-20	329.95	349.95
RD-18	449.95	469.95
RD-19	499.95	519.95
DISHWASHERS		
MC-18	\$319.95	\$339.95
MCP-18	329.95	349.95
MC-20	449.95	469.95
MCP-20	469.95	489.95
MC-21	374.95	399.95

## Automobile Air Conditioning--

(Concluded from Page 1, Column 3) final action on the proposed amendment, which would delete automobile air conditioning using Group 1 refrigerants from the scope of the code, at 4:30 p.m. on Tuesday, July 21.

Ray Kromer, new executive vice president of the national Refrigeration and Air Conditioning Contractors Association, appeared at the hearing and testified in support of the contractors.

After seeing that the council was impressed by the automobile industry's arguments that they were doing everything necessary to protect the public safety in the matter of automobile air conditioning and that they did not feel the problem could be solved on a local level, Kromer declared that the only way to keep the council from acting next Tuesday was to flood the council with telegrams from manufacturers and other interested parties asking them not to adopt the amendment.

He indicated that RACCA would send telegrams to local chapters throughout the country asking them to ask refrigeration equipment manufacturers to wire their opinions to the council. He said that he would also ask other refrigeration industry groups to add their weight to the attempt to defeat the amendment.

"We are in this thing with both feet," Kromer declared. He emphasized that the Detroit action would have national significance and would set a precedent that would affect local codes all over the country. He believed that it could be a step toward breaking down codes that the

refrigeration contractors have been fighting for years.

At the hearing, both the refrigeration representatives and the automobile representatives presented the same arguments to the council that they had presented in previous discussions with the city's department of buildings and safety engineering. Joseph P. Wolff, commissioner of the department, who has the task of enforcing the refrigeration safety code, proposed the amendment because he feels the code was never intended to cover refrigeration in automobiles.

John Phoney, attorney for the local refrigeration contractors association, raised the point of whether or not the code would be constitutional if it exempted automobile air conditioning and kept control of truck refrigeration systems.

Miriani agreed that he might have a point there, but suggested that he discuss it with the city's corporation counsel.

Miriani also offered the suggestion that the amendment be adopted, but that Commissioner Wolff set up a committee to keep an eye on automobile air conditioning to see if the public safety is protected without licensing.

"If we need to, we can adopt another ordinance later," he declared.

Miriani said that he recognized that, while the manufacturers and dealers might provide all the necessary safety measures, "there is a twilight zone of alley mechanics" who might need to be controlled through licensing. This was one of the major points brought out by the refrigeration contractors.

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**IT'S A SNAP-AROUND AMMETER**  
Measures current instantly without shutdowns or breaking of insulation for ammeter connections.

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LEATHER CASE AND  
VOLTAGE TEST LEADS.

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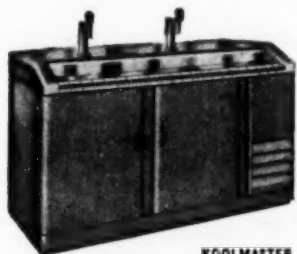
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you are buying for  
**TOMORROW**



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Ice Cube Maker



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Over a decade ago we gave them names... KOOLMASTER—DRY KOOL—KUBEMASTER... and they went on to set standards for the trade. Those early units are still giving economical, dependable service to people all over the country.

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phone, wire or  
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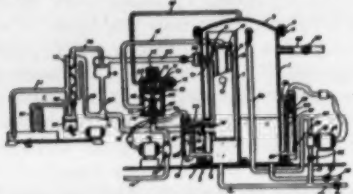
Locust & Walnut Streets  
HUDSON, WISCONSIN  
EXPORT SALES DIVISION  
Scheel International, Inc.  
4237 N. Lincoln Avenue, Chicago, U. S. A.



## PATENTS

Week of February 17  
(Continued)

2,628,225. COMBINED WATER COOLER AND CARBONATOR. James Kantor and Edward Rosenberg, Chicago, Ill.

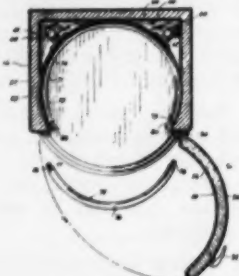


1. An apparatus of the character described, in combination: a closed tank; means for delivering to said tank CO<sub>2</sub> under a predetermined pressure; a closed bottom relatively small refrigerating tank disposed in said first tank having an open top communicating with the interior of the first tank and receiving an atmosphere of CO<sub>2</sub> from said first tank; a double walled refrigerating tube disposed longitudinally in said refrigerating tank; water filming means delivering water to the top of said tube at a point where the water will flow down the inside and outside walls of said tube in a film formation; means for circulating a refrigerant between the double walls of said tube; means for supplying water to said water filming means; a spray head mounted at the top of said first tank and means for withdrawing the water from the bottom of said refrigerating tank and delivering the same to the spray head at the top of said first tank.

2,628,260. REVOLVING SHELVING FOR REFRIGERATORS AND THE LIKE. William Karl Kader, Chicago, Ill.

In a refrigerator cooling chamber having a cylindrical wall provided with an opening, the combination comprising, an arcuate tray-carrying track section transversely angular in shape and including a horizontally inwardly projecting flange and a vertically extending back wall fixed to the cylindrical wall, said track section terminating adjacent each side of said opening in said cylindrical wall and pro-

vided with a transverse slot and a seat at each end thereof, said flange having formed thereon a concentric groove located outwardly of the inner peripheral edge of said flange, a detachable arcuate track section comprising portions adapted to rest upon said seats and offset project-



ing tongue portions for underlapped engagement with the flange of said first section, said detachable section having formed thereon on its upper face a concentric groove normally forming a continuation of the groove of said first section, and whereby the end portions of said detachable section normally rest in said seats with the terminal edges thereof abutting the ends of the horizontal flange of said first section and having its upper face in the plane of the upper face of said flange to afford a practically unbroken bearing surface whereby the grooves in both sections will be continuous to define a complete circle, and a circular tray carried by said track for rotative movement and having an annular projection adjacent its outer peripheral edge, said projection matching and corresponding to said first mentioned grooves in said track sections.

Week of February 24

2,629,141. FLOATING INNER PAN FOR REFRIGERATOR CABINET DOORS. John S. Palmer, Evansville, Ind., assignor to International Harvester Co.

1. A cabinet door comprising sheet material formed to provide front, top, bottom and side walls, with the top, bottom and sides walls each having an inwardly turned rear wall portion and an inwardly turned flange depending therefrom, a resilient gasket secured to said rear wall portions and extending around the rear edge of the door and having a pocket in one side thereof, a fastening member formed with spaced apart and substan-



Above: St. John's Hospital, Springfield, Mo. Right: 3 of 5 Schnacke Compressors which air-condition four departments of the hospital.

## SCHNACKE INTEGRAL UNIT STEP CONTROL AIR CONDITIONING

meets the exacting demands of modern hospitals

When St. John's selected SCHNACKE Compressors to air-condition its laboratory, surgery, nursery and coffee shop, the management was availing itself of the experience of nearly 40 other modern hospitals and sanitariums.

Four separate systems using five compressors assure that possible mechanical troubles will not likely cause all systems to be down at once. Multiple compressors as used here also provide more accurate zone control with fewer mechanical problems involved.

WRITE, WIRE or PHONE FOR HELPFUL ENGINEERING DATA

**SCHNACKE, INC.**

1101 N. Governor St.

Evansville, Ind.

## CHIEF DEVELOPMENT ENGINEER

We are substantially increasing our products and facilities and require a Chief Development Engineer.

Qualifications are as follows:

1. B.S. degree in either mechanical or electrical engineering.
2. A minimum of seven years experience in development and laboratory procedure in refrigeration or air conditioning.
3. Proven creative ability with initiative to follow program through to completion.

The right man can secure a top-level position with a sound financial company doing a volume business. In addition to the salary, the position carries profit sharing.

**BETZ CORPORATION**  
Hammond, Indiana

## Government Contracts

### PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing officer under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date. This will save time in filling your request. For reasons of economy, specifications are normally not included with the bid invitations unless the specification is a new one. First time bidders on a particular item should request a copy of applicable specifications and drawings at the time the request for a bid is made.

### DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
Corps of Engineers, U. S. Army, Office of the District Engineer, Omaha District, 1709 Jackson St., Omaha, Nebraska			
Rehabilitation of Air Conditioning System, Bldg. 576, Twin Cities Arsenal, Minneapolis, Minn.	Job	(ENG-25-066-54-13)	23 Jul 53
Contractors interested in inspecting the site of the proposed work should contact the Resident Engineer, Corps of Engineers, U. S. Army, Office of the Resident Engineer, Twin Cities Arsenal, Box 689, Minneapolis 1, Minn. The work will include: The rehabilitation of 2, 40-ton air conditioning systems, consisting of: (a.) Overhaul of 2, 40-ton reciprocating compressors and replacement of all freon cooling coils. (b.) Complete overhaul of temperature control systems and replacement of defective material and equipment. (c.) Removal of all nonmetallic sheathed cable wiring in both air conditioning equipment rooms, and furnishing and installation of new conduit systems for lighting, motors and control wiring. Plans, specifications and proposal forms will be furnished by this office upon request to the District Engineer, Omaha District, Corps of Engineers, 1709 Jackson St., Omaha 2, Nebr. Attn: Construction Div. Plans and specs. will be on file in this office where additional information concerning the proposed work may be obtained. Plans and specs. will also be available for inspection at the following places: St. Paul District, Corps of Engineers, 1217 U. S. Post Office & Customhouse, St. Paul 1, Minn. Chicago District, Corps of Engineers, 475 Merchandise Mart Plaza, Chicago 54, Ill. Duluth District, Corps of Engineers, Engineer Bldg., Canal Park, Duluth 1, Minn. Commanding General, Columbus General Depot, Columbus 15, Ohio. Attn: Quartermaster Purchasing Division			
Thermostat	1500 ea.	54-3	30 Jul 53

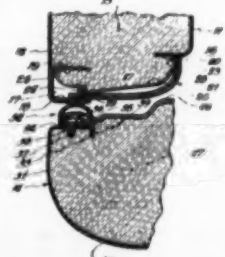
### GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
General Services Administration, Business Service Center, Region 3, Washington, D. C.			
Air conditioning F.O.B. No. 3 Job Hydrographic Bldg.,		(GS-R3-B-3075)	21 Jul 53

### CONTRACTS AWARDED THROUGH JULY 14

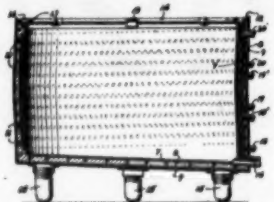
District Public Works Office, Eighth Naval District, New Orleans, La.  
Condenser Spray cooling system at the Ordnance Aerophysics

tially parallel legs with a flange depending from one leg thereof, said fastening member being adapted for positioning in said gasket pocket with the flange of said



member positioned so as to overlie in closely abutting relation the depending flange of said rear wall portions, means for securing said fastening member and said gasket to said rear wall portions, a panel forming the inner side of said door and extending between said rear wall portions with the marginal edges thereof extending into said fastening member and into frictional engagement with the spaced apart legs of said member whereby said member securely holds said panel in floating relation with respect to said walls.

2,629,228. REFRIGERATOR TANK. Henry C. Bergmann, South Gate, Calif.

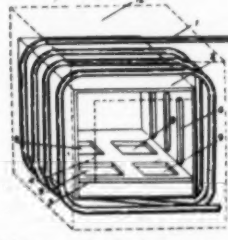


A cooling tank for milk and the like having a double wall with an inwardly beveled annular cover top, an open annular trough to receive milk mounted on said beveled top and having discharge ports in its bottom directed on to said beveled top to flow down along the inner wall of said tank, a plurality of separate pipe coils of flat form in cross section between said double walls and bearing on and around the inner wall one above the other for cooling it, separate supply and return pipe connections for each coil for directing refrigerant fluid through said pipe sections for cooling the inner wall of said tank with separate quantities of fluid for each coil, an expansion valve with thermostat control interposed between the source of supply of fluid and said supply pipe connections, and means for drawing off the cooled milk from said tank.

2,629,231. MILK CHUTE REFRIGERATOR. Frank Malek, Shaker Heights, Ohio.

A device of the character described comprising a unit of box-like form and having the opposite ends thereof open, the lower wall of that unit forming the base and having a floor member disposed above said base in a plane parallel with the base, said floor having a number of rectangular openings of uniform size and equally spaced apart therein, a member movably supported within each of said openings by means of spiral springs disposed between said members and said base, said springs adapted to be compressed downwardly by reason of a weight placed on said member, electrical contact means said members when pressed downwardly being adapted to

operate the last mentioned means for closing an electrical circuit, said unit dis-



posed within an inclosing means of similar form and having insulated walls, coils

consisting of an endless pipe disposed around the said unit between and the said walls, door hingedly attached on the ends of the said inclosing means and adapted to close said ends and provide means of access to said unit, said doors maintained in a closed position by means of a horizontal rod extending between the opposite walls of said inclosing means and movably supported in said walls, one end of said rod extending outwardly from one of said walls to provide a handle means for operating said rod, and the outer of said doors provided with a window through which a signal operated by the said rod may be viewed.

(To Be Continued)

### Room Cooler Manufacturers Note:

## You'll Need The Sales Edge We Deliver In The South

Here is an opportunity for you to acquire a complete, trained and productive sales organization for 14 Southern States. We cover this territory intensively with 12 alert, experienced men—not pins on a map. Our 30-year record has earned a reputation it would take your own people years to build. We concentrate on a few strong lines. To round them out, we need a first-rank air conditioning manufacturer. For details, write or call us today.

**JOHN T. EVERETT & CO.**

W. N. Wilkerson, Managing Partner

MEMPHIS 1, Tenn. - Telephone 37-4525

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7-20-52



## Service COD Helps Dealer Cut \$16,000 Annual Loss

LEXINGTON, Ky. — A \$16,000 a year loss on the service department is a bit hard to take and Charley Jett, local appliance dealer, decided to do something about it. This is what he did:

"Now when customers call for service," he explains, "we tell them we'll be glad to send our man out, but we take just a little longer to explain that we've had our auditor go over our books pretty carefully and he found out that it costs us \$1 for every service charge we put on our books. So, rather than have to pass that extra cost on to the customer, we're running everything in our service department on a strictly c.o.d. basis now."

"If they say they haven't the money, we ask them when they will have it and send the man out then, unless it's a really serious emergency. They can get the money every time if they have to."

Don't the customers protest this pressure to pay?

"Not a bit more," replied Jett, "than they do our asking them to make payment after we've granted them credit. And this way we're not out nearly as much money."

## Service Firm Files Name

BUFFALO—A business name has been filed in the Erie County clerk's office for the Grand Island Appliance Service Co., Base Line Road, Grand Island, by Richard M. Freer, Ralph B. Kreger, and Harold B. Long.

## Apprentice Steamfitters Make Bell & Gossett Tour

MORTON GROVE, Ill. — Annual field trip of the Wisconsin Schools of Vocational and Adult Education was held this year at Bell & Gossett, hot water heating and refrigeration equipment manufacturer here.

Twenty students, all apprentice steamfitters, toured the Bell & Gossett plant and studied the extensive manufacturing facilities as part of their 500-hr. vocational program. Nine Wisconsin cities were represented. Harry R. Henke, advertising manager of Bell & Gossett, acted as host during the visit.

Students, according to their instructor, M. W. Huguet, are indentured for a period of five years to joint apprentice steamfitter committees in their localities. The committees, composed of an equal number of master and journeymen steamfitters, act in an advisory capacity to the state's vocational schools and industrial commission.

## A. O. Smith Names Brinker Director of Marketing

MILWAUKEE—Appointment of J. H. Brinker as director of marketing of A. O. Smith Corp. was announced by the company recently.

Brinker was formerly assistant executive in charge of distribution. His new activities include direct supervision of advertising and sales promotion, of exhibits and displays of company products, and of the market analysis department.

Brinker has been with the company since 1947.

## Klein Buys Klinker Bros., Starts Reorganization

CINCINNATI — Klinker Brothers, Inc., wholesale appliance parts and service company here was purchased recently by John A. Klein, who is now the new president and treasurer of this 12-year old firm.

The former owners are George H. and G. J. Klinker. Klinker Bros., Inc. is an authorized distributor of electric washing machines and dryers covering a seven-state area, including Ohio, West Virginia, Indiana, Illinois, Pennsylvania, Tennessee, and Alabama.

Klein is also president of Marlein, Inc., a plastic novelty manufacturing company. He is widely known as a management consultant and formerly was a systems engineer with the Crosley Div. of the Avco Mfg. Corp. A program of reorganization has already been introduced under the new management with renovation and enlargement of the service department.

## Johnson Service Co. Opens Branch at La Crosse, Wis.

MILWAUKEE—A new branch office at La Crosse, Wis. has been opened recently by Johnson Service Co., manufacturer of temperature and air conditioning controls. The new branch will serve the La Crosse and Eau Claire areas in Wisconsin, and the Minnesota region around Winona.

E. K. Edwards, formerly of Johnson's Milwaukee office, will be the sales manager in charge of the La Crosse branch.



"Slants on Service" is a "package" devised by the NEWS to meet the needs of its busy readers in the service and contracting business.

## Which Compressor Repairs Should be Made In Field?

Some servicemen may have different ideas than those of compressor manufacturers when it comes to deciding just how much repair work should be done in the field or shop and what should be left for the factory.

But in any event, servicemen will be interested in what Tecumseh Products Co. has to say on this subject regarding its FFF, FFP, VD, VF, VFP, and VFPH compressors: "It is our recommendation," the company suggests, "that field or service shop repairs be limited to the following and that if other repairs are needed, that the compressor be replaced and returned to the factory for repairs:

- "1. Replace seal assembly in its entirety.
- "2. Replace valve plate assembly.
- "3. Replace any or all gaskets.
- "4. Replace oil pump assembly.
- "5. Replace line valves.
- "6. Replace oil sight glass.
- "7. Replace strainer.

"8. Wash out compressor and change oil.

"9. Dehydrate to remove moisture.

"The above leaves the replacement of shaft, main bearings, cam, rods, or pistons, and pins as the only operations that we feel need to be done in our factory."

## Postcard Permits Check

### On Customer Satisfaction

Aim of successful service is a satisfied customer, and a good way to check on that, one dealer has found, is to send out return-reply cards.

Customers are asked to note (1) whether work was entirely satisfactory, (2) if work was completed when promised, (3) if serviceman was courteous, (4) if they can suggest any ways to improve the company's service.

This card also shows company's record of total charges paid to serviceman. Latter gives the company a check on serviceman's collections.

Use of the card can build up valuable references from satisfied customers and detect dissatisfaction before customer turns to a competitor.

## CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$5.00 per insertion. Limit 50 words. 10¢ per word over 50.

RATES for all other classifications \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

### POSITIONS WANTED

VERSATILE SALES representative or service manager. Need someone to spark your sales force, or solve your service and field engineering problems? My more than 20 years' experience in the branch sales and service departments of such leaders as Norge, Frigidaire, Kelvinator, and Copeland—and operation of own refrigeration service organization—may be just what you need. Accredited Refrigeration Engineer—graduate of Chicago Engineering Institute, granted 16 refrigeration patents. 41 years young. Will travel anywhere. Let's talk it over at your convenience. LOUIS L. FEENEY, 1827 So. Bronson Ave., Los Angeles 19, Calif. Phone REpublic 3-6322.

### POSITIONS AVAILABLE

ENGINEER WITH ability to take charge of production in the manufacturing of ice cube machines. A real position for a top-flight person with a progressive organization. Position in twin cities. Please furnish complete information on qualifications and desired salary. Your present employer will not be contacted. BOX 803, MINNEAPOLIS ATHLETIC CLUB, Minneapolis, Minnesota.

WANTED: EXPERIENCED refrigeration service mechanic for commercial work in air conditioning and refrigeration. (Frigidaire and Tyler dealer). Year-round work at good pay. Apply ALLIED REFRIGERATION CO., 904 S. Erie Highway, Hamilton, Ohio, or phone HAMILTON 5-5306.

DEALER FOR nationally-advertised equipment needs commercial refrigeration and air conditioning service and installation men capable of assuming the responsibility of installing and servicing 1 to 50-ton systems. Good working conditions. Year-round employment. State age, experience and references. H. L. ARNOLD CO., INC., 104 Congress, Austin, Texas.

CARRIER DISTRIBUTOR, established 30 years, needs engineer with experience in air conditioning and refrigeration. Must be capable of designing and laying out large and small heating and cooling systems and commercial refrigeration systems. Write, giving particulars, to GEORGE F. DENT COMPANY, Bay City, Michigan or phone Bay City 3-3546.

HUNTER FAN and Ventilating Company, Memphis, Tenn. has an opening for a field representative in the sales and service of room air conditioners. Must be able to hold sales meetings and set up service stations. Extensive travel. Should have B.S. degree in Electrical or Mechanical Engineering. Wonderful opportunity for the right man. If interested, furnish complete resume of education and experience, along with salary required, to the Personnel Director, HUNTER FAN AND VENTILATING COMPANY, Box 2858, Memphis, Tennessee.

### EQUIPMENT WANTED

WANTED—REFRIGERATORS. 1939 or later, any condition, quantity. Contact DAVID KESTENBAUM & SON, 330 - 7th Avenue, New York 1, N. Y.

### EQUIPMENT FOR SALE

40 BRAND-NEW, in guarantee, prominent brand sealed 1/4-hp. compressors with receiver for use with F-12 or F-22, \$50.00 each, lots of ten or more. CITY MILK VENDING CORP., 58-64 Maurice Avenue, Maspeth, New York.

BRAND-NEW, LATEST model Compressors up to 5 hp. at tremendous savings! Sealed units—1/4 hp. @ \$45; 1/2 hp. @ \$55; 3/4 hp. @ \$70. Model S64 1/4 hp. domes (motor compressor assemblies) @ \$33. Also 1/4 hp. DC and 25 cycle AC open-type. Quantities limited, so act now! MANN REFRIGERATION SUPPLY CO., 440 Lafayette St., New York City Gramercy 3-8000.

ATTENTION SERVICEMEN — Send for our 1953 Catalog. Relays, expansion valves, controls, dehydrators, V belts, open & hermetic units. All new merchandise at great savings up to 50%. Sold on Money Back Guarantee. WALTER W. STARR REFRIGERATION, 2833 Lincoln Ave., Chicago 13, Illinois.

### FRANCHISES WANTED

TWO, THREE or more refrigeration items wanted for Midwest territory. Good job promised by 12 years of continuous contact with jobbers, dealers, distributors in recent position as sales manager for nationally-known manufacturer. Prefer covering Illinois, Indiana, Michigan, Ohio and Wisconsin; Chicago headquarters. Write BOX 4341, Air Conditioning & Refrigeration News.

### FRANCHISES AVAILABLE

MANUFACTURER'S REPRESENTATIVES desired for various territories in United States for our new Cooler Cub bottle water coolers. These are smaller in size and weight but equal in capacity to others. Extremely attractive price setup. Give full background and territory covered. REMCOR PRODUCTS COMPANY, 321 E. Grand Avenue, Chicago 11, Illinois.

### BUSINESS OPPORTUNITIES

FOR SALE: long-established wholesale and retail refrigeration business located in Detroit, Michigan, grossing over \$60,000 per year. Yours completely equipped for only \$8,500. Write BOX 4340, Air Conditioning & Refrigeration News.

ESTABLISHED EXPORT firm wishes to contact manufacturers of 1/2 to 1-hp. air conditioning unit for purchase and sale under own brand. Write BOX 4342, Air Conditioning & Refrigeration News.

WELL-ESTABLISHED COMMERCIAL refrigeration and air conditioning sales and service business located northern Nassau County, Long Island. Service contracts, etc. Terrific sales potential. Priced for quick sale. BOX 4343, Air Conditioning & Refrigeration News.

ELECTRICAL APPLIANCE business for sale: 20 miles from Milwaukee, Wis. \$15,000.00 including inventory and equipment. Grossing \$35,000 to \$45,000. Crosley full-line franchise, also Hamilton, Whirlpool, RCA, Jordan, Arvin, Lewyt, Ironrite, Youngstown, popular small appliances, and commercial refrigeration. Write BOX 4344, Air Conditioning & Refrigeration News.

### MISCELLANEOUS

NORGE SEALED units remanufactured or exchanged. Immediate delivery from stock, 2 year warranty. Freon refrigerant. Write for prices and shipping instructions. Genuine Norge terminals for Norge sealed units. Sets of three \$1.15 plus postage. MODERN REFRIGERATION CO., INC., 12541 E. McNichols Road, Detroit 5, Mich.

# DOES CLEANING A STRAINER REALLY CURE THE TROUBLE?

When "no refrigeration" is caused by a sludge-clogged strainer, the cure is pretty obvious. But every time you clean the strainer and then let it go at that, you're asking for trouble. It's like fixing a punctured inner tube without pulling the nail out of the tire. You've taken care of the trouble for a while, but it won't be long until the same thing happens again.

Whenever you clean or replace the strainer, the safe thing to do is recharge the system with fresh refrigerant and clean oil. After all, the best refrigeration oil costs less than the oil you change every 1000 miles in your car.

The best way to avoid sludge problems is to recharge with Suniso . . . the refrigeration oil that is used and recommended by most refrigeration manufacturers. Because its quality is controlled from crude oil to can by Sun Oil Company, you can be sure it will always give you the same trouble-free performance.

## Sold by Leading Wholesalers Everywhere

**SUNISO ADVANTAGES** • provides adequate lubrication at all temperatures encountered in service • possesses a high degree of stability • won't throw out wax deposits under low temperatures • has extremely low moisture content • resists formation of corrosive acids and carbon under service conditions • separates readily from refrigerant—won't react adversely

**SUNISO**  
REFRIGERATION OIL  
A PRODUCT OF SUN OIL COMPANY



## REFRIGERATION At Its Best!

WITH  
**DOLE**  
**VACUUM**  
**COLD**  
**PLATES**



THE FAMOUS  
**Kungsholm**  
**Scandinavian**  
**Restaurant**  
CHICAGO, ILLINOIS

Uniform low temperatures are constantly maintained in this specially-designed, cold plate surface dispensing table by the use of **DOLE VACUUM COLD PLATES**. Cold food delicacies are always kept appetizingly fresh and tasty until served. . . . **DOLE VACUUM COLD PLATES** are available in lengths and widths to fit any standard or special dispensing tables, cabinets, or shelves.

WRITE FOR CATALOG AAE

### DOLE REFRIGERATING COMPANY

DOLE  
5920 NORTH PULASKI ROAD  
CHICAGO, ILLINOIS  
103 Park Avenue, New York  
In Canada: Dole Refrigerating Products, Ltd.  
44 Elgin Street, Brantford, Ontario



LEFT: Housewife removes one of the filters in the Hydraline year-round residential air conditioning system. These filters, which can be removed by just lifting the register, are located in the return air register.

RIGHT: Borg-Warner's year-round air conditioning unit with grille removed.

## Borg-Warner Introduces Hydraline Cooler--

(Concluded from Page 1, Column 4) tions are available in all sizes, Borg-Warner said.

Where low temperature well or lake water is available for direct use, it can do a satisfactory cooling job without using mechanical water chillers, the company claims.

With mechanical refrigeration equipment, water is usually required to cool the condenser coils at the rate of approximately 1.5 g.p.m. per ton of refrigeration, depending on the temperature of the water.

With the unit split system, however, if either well or lake water within a range of 40 to 50° F. is directly available, at a rate of 5 g.p.m. per ton of refrigeration, water may be circulated through the piping system in the summertime by making use of the available water pressure system. Hardness of the water which might cause liming of the system, must also be considered, however.

The basic unit for either in-wall or under-floor installation measures 17 1/2 by 14 by 4 1/2 in. It consists of the cooling coil, a blower, a condensate drain, filter in front of the return air grille, and diffuser type outlet grille to direct cooled air upward along outer walls.

Each unit is equipped with a manual blower speed control to give quiet operation on low speeds and automatically increased fan capacity on high speeds.

Advantages claimed for the new unit over central forced air systems are:

1. The air supply at the register can be individually controlled to exactly balance the requirements of individual rooms after the installation is made.

2. Air filtering is done at the return air register in each room rather than at the central plant. Filters may be vacuum cleaned while cleaning rugs. They may be removed or replaced simply by raising the return air register.

The Hydraline air conditioner can be adapted to dual wall application with a stack head from the top of the unit to a register on the opposite wall. The stack can be carried up for a high wall outlet or carried through to serve second floor rooms.

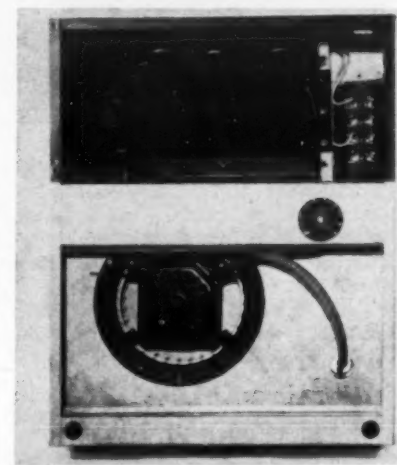
There is a capped opening in each basic conditioner for these various applications and 40% of the total capacity can be directed through this opening. The distribution balance can be controlled by means of an adjustable damper in the unit.

In the Borg-Warner units, the primary heating or cooling surfaces consist of a continuous water tube, folded upon itself, that measures 10 ft. long and 2 1/2 in. wide. The tube is constructed from a drawn sheet of strip red brass of .004 in. thickness.

Between the folds of the continuous primary water tube are die formed fins of .004 in. thickness manufactured on progressive dies. Total heat exchange surface is equivalent to 60 sq. ft. of gravity radiation under normal operating conditions, the manufacturer says.

For domestic ratings, the Hydraline air conditioner has a maximum c.f.m. of 90 for heating and 107 for cooling. Maximum cooling capacity is 3,500 B.t.u. with a water flow of 1 g.p.m. of 40° F. water. With a water flow of 1.5 g.p.m. of 40° F. water, the maximum cooling capacity is 3,750 c.f.m. This is based on entering air at 85° d.b. or 70° w.b.

On the heating cycle, with enter-



ing air at 65° F. and inlet water temperature of 120° F., total B.t.u. output at the register is 3,300. With 180° F. water it rises to 7,200 and with 200° F. water, it rises to 7,200 and with 200° F. water, it is 8,200.

For commercial and industrial applications, c.f.m. ratings are increased and the cooling and heating capacity increases likewise.

Central controls for the system do not vary much from the methods employed with central air systems. Several control systems are recommended by the company.

First is the single zone which consists of a central heating thermostat which controls the operation of the booster intermittently with boiler water temperature being maintained with conventional aquastat control. Fan operating is automatic by aquastat control within each unit.

On the cooling cycle a thermostat of the low voltage type, operating through relays, controls the booster and chiller starter in parallel circuit. If zoning is required on the winter

cycle, each zone or room may be provided with individual temperature controls consisting of a low voltage thermostat operating through relay circuits in series with the unit high temperature aquastat to operate the unit blower as required.

## Freezer-Food Plan--

(Concluded from Page 1, Column 2) ticipate in the Certified program will be required to abide by a code of ethics and maintain certain operational standards.

A voluntary inspection program is also to be established.

National advertising in consumer publications is planned, and Certified program members will also receive news releases, radio scripts, and other promotional aids for local use.

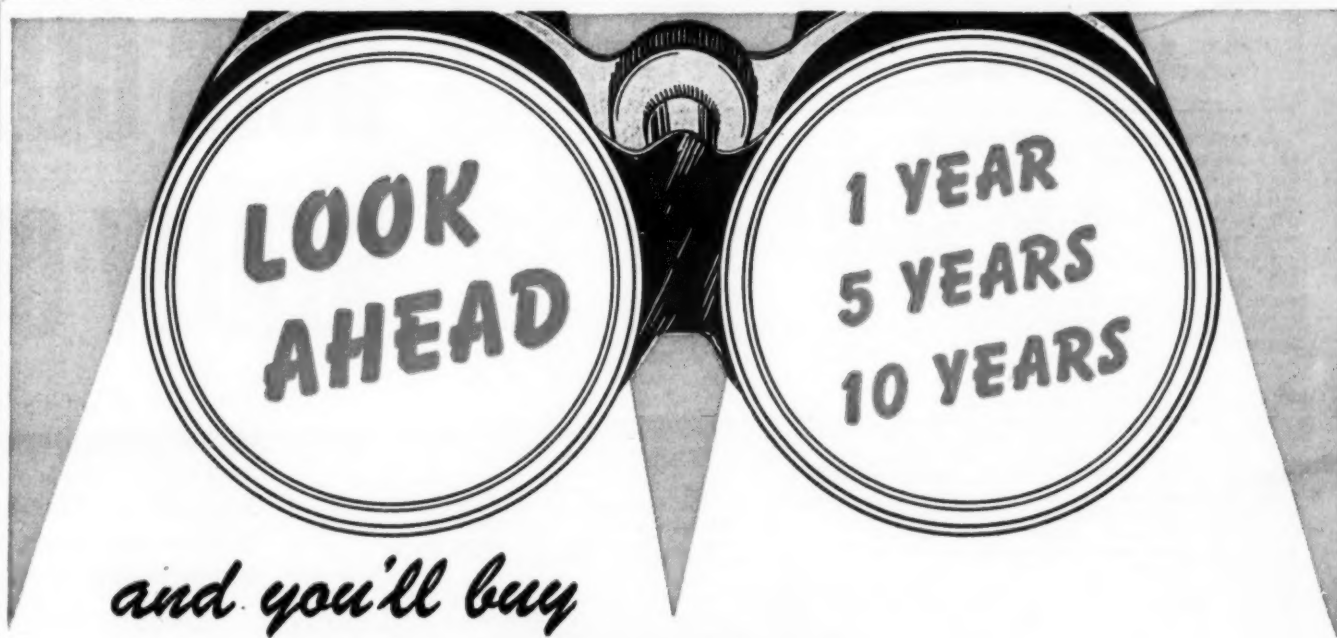
An identification emblem and national slogan will be developed for the Certified program.

It will not be necessary for all Institute members to participate in the new program, for this is strictly a voluntary operation.

Initial details of the Certified program were worked out at a recent meeting of the Institute's board of directors in Chicago, where a seven-man steering committee was appointed by President E. E. Jackson. Members of this committee are as follows:

Tom Bean, New Orleans; Henry Admudson, St. Paul; Ken Charlton, Speedway, Ind.; Archie Limon, London, Ont., Canada; E. G. Spencer, Houston; James Culver, La Mesa, Calif., and Sid. Scobel, Dewitt, N. Y.

Robert Madeira, executive secretary of the Institute, will act as executive director of the Certified program.

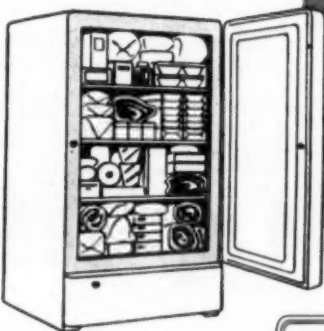


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